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Part II

Environmental Protection Agency

40 CFR Parts 85, 86, 90, et al.

**Test Procedures for Testing Highway and
Nonroad Engines and Omnibus Technical
Amendments; Proposed Rule**

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 85, 86, 89, 90, 91, 92, 94, 1039, 1048, 1051, 1065, and 1068

[AMS-FRL-7803-7]

RIN 2060-AM35

Test Procedures for Testing Highway and Nonroad Engines and Omnibus Technical Amendments

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of proposed rulemaking.

SUMMARY: This proposed regulation aims to revise and harmonize test procedures from the various EPA programs for controlling engine emissions. It will not address emission standards, nor is it intended to change the emission reductions expected from these EPA programs. Rather, it proposes to amend the regulations, which contain laboratory specifications for equipment and test fuels, instructions for preparing engines and running tests, calculations for determining final emission levels from measured values, and instructions for running emission tests using portable measurement devices outside the laboratory. These regulations currently apply to land-based nonroad diesel engines, land-based nonroad spark-ignition engines over 19 kilowatts, and recreational vehicles. These proposed revisions will update the regulations to deal more effectively with the more stringent standards recently promulgated by EPA and will also clarify and better define certain elements of the required test procedures. In particular, the proposed amendments will better specify the procedures applicable to field testing under the regulations.

This action also proposes to apply the regulations to highway heavy-duty

diesel engine regulations. This action is appropriate because EPA has historically drafted a full set of testing specifications for each vehicle or engine category subject to emission standards as each program was developed over the past three decades. This patchwork approach has led to some variation in test parameters across programs, which we hope to address by adopting a common set of test requirements. The primary goal of this effort is to create unified testing requirements for all engines, which when implemented will streamline laboratory efforts for EPA and industry.

This action will also include other technical changes intended to clarify and better define requirements for several different EPA engine programs. These changes are relatively minor and are technical in scope.

DATES: *Comments:* Send written comments on this proposed rule by October 29, 2004. See Section IV of the **SUPPLEMENTARY INFORMATION** section for more information about written comments.

Hearings: We will hold an informal public workshop in Ann Arbor on October 1, 2004. If anyone requests a public hearing, we will hold it on September 27, 2004. To request a public hearing, send a request to the contact in **FOR FURTHER INFORMATION CONTACT** by September 20, 2004. See Section III for more information about public workshops and hearings.

ADDRESSES: You may submit comments, identified by docket number OAR-2004-0017, by any of the following methods:

Federal Rulemaking Portal: <http://www.regulations.gov>. Follow the on-line instructions for submitting comments.

Agency Web site: <http://www.epa.gov/edocket>. Follow the instructions for submitting comments. Note that this is

not available until after this proposal is published in the **Federal Register**.

E-mail: testamendments@epa.gov. Specify docket number OAR-2004-0017 in the body of the message.

Fax: (202) 260-4400.

Mail or Hand Delivery: Environmental Protection Agency, Air Docket, Mailcode 6102T, 1200 Pennsylvania Ave., NW., Washington, DC, 20460.

Hand Delivery or Courier: EPA Docket Center, (EPA/DC) EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC., Attention Docket ID No. A-2001-28. Such deliveries are only accepted during the Docket's normal hours of operation from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays.

Instructions: Include the agency name and docket number in all submissions for this rulemaking. All comments received will be posted without change to <http://www.epa.gov/edocket>, including any personal information provided. For detailed instructions on submitting comments and additional information on the rulemaking process, see the "Public Participation" heading of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: For access to the docket to read background documents or comments received, go to the Web site at the URL identified above or to the Air Docket at the address identified above.

FOR FURTHER INFORMATION CONTACT: Alan Stout, U.S. EPA, Voice-mail (734) 214-4636; E-mail: stout.alan@epa.gov

SUPPLEMENTARY INFORMATION:

A. Regulated Entities

This proposed action would affect companies that manufacture or sell engines. Regulated categories and entities include:

Category	NAICS Codes ^a	Examples of potentially regulated entities
Industry	333618	Manufacturers of new engines.

^a North American Industry Classification System (NAICS).

This list is not intended to be exhaustive, but rather provides a guide regarding entities likely to be regulated by this action. To determine whether particular activities may be regulated by this action, you should carefully examine the proposed regulations. You may direct questions regarding the applicability of this action to the person listed in **FOR FURTHER INFORMATION CONTACT**.

B. How Can I Get Copies of This Document and Other Related Information?

1. *Docket.* EPA has established an official public docket for this action under Docket ID No. OAR-2004-0017. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the

official docket, the public docket does not include Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Documents in the official public docket are listed in the index list in EPA's electronic public docket and comment system, EDOCKET. Documents may be available either electronically or in hard copy. Electronic documents may be viewed through EDOCKET. Hard copy documents may be viewed at the EPA

Docket Center, (EPA/DC) EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. Docket in The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744.

This proposal relies in part on information related to our November 2002 final rule, which can be found in Public Docket A-2000-01. This docket is incorporated by reference into the docket for this action, OAR-2004-0017.

2. **Electronic Access.** You may access this **Federal Register** document electronically through the EPA Internet under the **Federal Register** listings at <http://www.epa.gov/fedrgrstr/> Or you can go to the federal-wide eRulemaking site at <http://www.regulations.gov>.

An electronic version of the public docket is available through EDOCKET. You may use EDOCKET at <http://www.epa.gov/edocket/> to submit or view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the appropriate docket identification number.

Certain types of information will not be placed in the EDOCKET. Information claimed as CBI and other information whose disclosure is restricted by statute, which is not included in the official public docket, will not be available for public viewing in EPA's electronic public docket. EPA's policy is that copyrighted material will not be placed in EPA's electronic public docket but will be available only in printed, paper form in the official public docket. To the extent feasible, publicly available docket materials will be made available in EPA's electronic public docket. When a document is selected from the index list in EDOCKET, the system will identify whether the document is available for viewing in EPA's electronic public docket. Publicly available docket materials that are not available electronically may be viewed at the docket facility identified in Unit I.B. EPA intends to work towards providing electronic access to all of the publicly available docket materials through EPA's electronic public docket.

For public commenters, it is important to note that EPA's policy is that public comments, whether submitted electronically or in paper, will be made available for public viewing in EPA's electronic public docket as EPA receives them and without change, unless the comment

contains copyrighted material, CBI, or other information whose disclosure is restricted by statute. When EPA identifies a comment containing copyrighted material, EPA will provide a reference to that material in the version of the comment that is placed in EPA's electronic public docket. The entire printed comment, including the copyrighted material, will be available in the public docket.

Public comments submitted on computer disks that are mailed or delivered to the docket will be transferred to EPA's electronic public docket. Public comments that are mailed or delivered to the Docket will be scanned and placed in EPA's electronic public docket. Where practical, physical objects will be photographed, and the photograph will be placed in EPA's electronic public docket along with a brief description written by the docket staff.

C. How and to Whom Do I Submit Comments?

We are opening a formal comment period by publishing this document. We will accept comments for the period indicated under **DATES** above. If you have an interest in the program described in this document, we encourage you to comment on any aspect of this rulemaking.

Your comments will be most useful if you include appropriate and detailed supporting rationale, data, and analysis. If you disagree with parts of the proposal, we encourage you to suggest and analyze alternate approaches to meeting the air quality goals described in this proposal. You should send all comments, except those containing proprietary information, to our Air Docket (see **ADDRESSES**) before the end of the comment period.

You may submit comments electronically, by mail, or through hand delivery/courier. To ensure proper receipt by EPA, identify the appropriate docket identification number in the body of your comment. Submit your comments within the specified comment period. Comments received after the close of the comment period will be marked "late." EPA is not required to consider these late comments. If you wish to submit CBI or information that is otherwise protected by statute, please follow the instructions in Section IX.D. Do not use EPA Dockets or e-mail to submit CBI or information protected by statute.

1. Electronically

If you submit an electronic comment as prescribed below, we recommend that you include your name, mailing

address, and an e-mail address or other contact information in the body of your comment. Also include this contact information on the outside of any disk or CD ROM you submit, and in any cover letter accompanying the disk or CD ROM. This ensures that you can be identified as the submitter of the comment and allows us to contact you if we cannot read your comment or if we need further information on the substance of your comment. Our policy is that we will not edit your comment; any identifying or contact information provided in the body of a comment will be included as part of the comment that is placed in the official public docket and made available in EPA's electronic public docket. If we cannot read your comment due to technical difficulties and cannot contact you for clarification, we may not be able to consider your comment.

i. EPA Dockets

To submit comments on EPA's electronic public docket, go directly to EPA Dockets at <http://www.epa.gov/edocket> and follow the online instructions for submitting comments. To access EPA's electronic public docket from the EPA Internet Home Page, select "Information Sources," "Dockets," and "EPA Dockets." Once in the system, select "Quick Search," and then key in Docket ID No. OAR-2004-0017. The system is an "anonymous access" system, which means we will not know your identity, e-mail address, or other contact information unless you provide it in the body of your comment.

ii. E-Mail

Comments may be sent by electronic mail to testamentments@epa.gov. In contrast to EPA's electronic public docket, EPA's e-mail system is not an "anonymous access" system. If you send a comment via electronic mail directly to the Docket without going through EPA's electronic public docket, the e-mail system automatically captures your e-mail address. E-mail addresses that are automatically captured are included and made available as part of the comment that is placed in the official public docket.

iii. Disk or CD ROM

You may submit comments on a disk or CD ROM that you send to the mailing address identified in Section IX.A.2 below. Avoid the use of special software, characters, and any form of encryption.

2. By Mail

Send your comments to: Air Docket, Environmental Protection Agency,

Mailcode: 6102T, 1200 Pennsylvania Ave., NW., Washington, DC, 20460.

3. By Hand Delivery or Courier

Deliver your comments to: EPA Docket Center, (EPA/DC) EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC., Attention Docket ID No. A-2001-28. Such deliveries are only accepted during the Docket's normal hours of operation from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays.

D. How Should I Submit CBI to the Agency?

Do not submit information that you consider to be CBI electronically through EPA's electronic public docket or by e-mail. Send or deliver information identified as CBI only to the following address: U.S. Environmental Protection Agency, Assessment and Standards Division, 2000 Traverwood Drive, Ann Arbor, MI, 48105, Attention Docket No. OAR-2004-0017. You may claim information that you submit to EPA as CBI by marking any part or all of that information as CBI (if you submit CBI on disk or CD ROM, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

In addition to one complete version of the comment that includes any information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket and EPA's electronic public docket. If you submit the copy that does not contain CBI on disk or CD ROM, mark the outside of the disk or CD ROM clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and EPA's electronic public docket without prior notice. If you have any questions about CBI or the procedures for claiming CBI, please consult the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

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I. Modified Test Procedures for Highway and Nonroad Engines

A. Incorporation of Nonroad Test Procedures for Heavy Duty Highway Engines

As part of our initiative to update the content, organization and writing style of our regulations, we are proposing revisions to our test procedures.¹ We have grouped all of our engine dynamometer and field testing test procedures into one part entitled, "Part 1065: Test Procedures." For each engine or vehicle sector for which we have recently promulgated standards (such as land-based nonroad diesel engines or recreational vehicles), we identified an individual part as the standard-setting part for that sector. These standard-setting parts then refer to one common set of test procedures in part 1065. We intend in this rule to continue this process of having all our engine programs refer to a common set of procedures by applying part 1065 to all heavy-duty highway engines.

In the past, each engine or vehicle sector had its own set of testing procedures. There are many similarities in test procedures across the various sectors. However, as we introduced new regulations for individual sectors, the more recent regulations featured test procedure updates and improvements that the other sectors did not have. As this process continued, we recognized that a single set of test procedures would allow for improvements to occur simultaneously across engine and vehicle sectors. A single set of test procedures is easier to understand than trying to understand many different sets of procedures, and it is easier to move toward international test procedure harmonization if we only have one set of test procedures. We note that procedures that are particular for different types of engines or vehicles, for example, test schedules designed to

reflect the conditions expected in use for particular types of vehicles or engines, will remain separate and would be reflected in the standard-setting parts of the regulations.

In addition to reorganizing and rewriting the test procedures for improved clarity, we are proposing to make a variety of changes to improve the content of the testing specifications, including the following:

- Writing specifications and calculations in international units
- Adding procedures by which manufacturers can demonstrate that alternate test procedures are equivalent to specified procedures.
- Including specifications for new measurement technology that has been shown to be equivalent or more accurate than existing technology; procedures that improve test repeatability, calculations that simplify emissions determination; new procedures for field testing engines, and a more comprehensive set of definitions, references, and symbols.
- Defining calibration and accuracy specifications that are scaled to the applicable standard, which allows us to adopt a single specification that applies to a wide range of engine sizes and applications.

Some emission-control programs already rely on the test procedures in part 1065. These programs regulate land-based nonroad diesel engines, recreational vehicles, and nonroad spark-ignition engines over 19 kW.

In this document, we are proposing to adopt the lab-testing and field-testing specifications in part 1065 for all heavy-duty highway engines, as described in Section II.J. These procedures would replace those currently published in subpart N in 40 CFR part 86. We are proposing a gradual transition from the part 86 procedures. We will allow the use of part 1065 procedures beginning in the 2006 model year. By the 2008 model year, part 1065 procedures will be required for any new testing. For all testing completed for 2007 and earlier model years, manufacturers may continue to rely on carryover test data based on part 86 procedures to certify engine families in later years. In addition, other subparts in part 86, as well as regulations for many different nonroad engines refer to the test procedures in part 86. We are including updated references for all these other programs to refer instead to the appropriate cite in part 1065.

Part 1065 is also advantageous for in-use testing because it specifies the same procedures for all common parts of field testing and laboratory testing. It also contains new provisions that help

¹ For an overview of our new regulatory organization, refer to our fact sheet entitled, "Plain Language Format of Emission Regulations for Nonroad Engines" EPA420-F-02-046, September 2002 <http://www.epa.gov/otag/largesi.htm>.

ensure that engines are tested in a laboratory in a way that is consistent with how they operate in use. These new provisions will ensure that engine dynamometer lab testing and field testing are conducted in a consistent way.

In the future, we may propose to apply the test procedures specified in part 1065 to other types of engines, so we encourage companies involved in producing or testing other engines to stay informed of developments related to these test procedures. We also request comment on whether we should make part 1065 applicable for light-duty vehicles, light-duty trucks, motorcycles, and aircraft in the future. Although light-duty vehicles, light-duty trucks, and motorcycles are tested on chassis dynamometers, rather than engine dynamometers, there are several aspects of testing that are common. For example, emission sampling systems, dilution systems, gas analyzers, PM measurement equipment, some test sequences, fuels, analytical gas standards, and specifications related to oxygenated fuels are all similar. However, there are differences, such as chassis dynamometer specifications, vehicle intake air, exhaust system, and coolant specifications, some test sequences such as evaporative and refueling tests, vehicle preparation, and some emission calculations (e.g., g/mi vs g/kW-hr) that would have to be addressed in any future decision to apply part 1065 to these engines.

Although testing aircraft engines requires some special provisions, there are several aspects of testing that are common, such as emission sampling systems, dilution systems, gas analyzers, PM measurement equipment, some test sequences, fuels, analytical gas standards, and specifications related to oxygenated fuels.

B. Revisions to Part 1065

Part 1065 was originally adopted on November 8, 2002 (67 FR 68242), and was initially applicable to standards regulating large nonroad spark-ignition engines and recreational vehicles under 40 CFR parts 1048 and 1051. The recent rulemaking adopting emission standards for nonroad diesel engines has also made part 1065 optional for Tier 2 and Tier 3 standards and required for Tier 4 standards. The test procedures currently in part 1065 are sufficient to conduct testing, but we are proposing to reorganize and add content to improve these procedures. In particular, we propose to reorganize part 1065 by subparts as shown below:

Subpart A: General provisions; global information on applicability, alternate procedures units of measure, etc.
 Subpart B: equipment specifications; required hardware for testing
 Subpart C: measurement instruments
 Subpart D: calibration and performance checks; for measurement systems
 Subpart E: engine selection, preparation, and maintenance
 Subpart F: test protocols; step-by-step sequences for testing and test validation.
 Subpart G: calculations and required information
 Subpart H: fuels, fluids, and analytical gases
 Subpart I: oxygenated fuels; special test procedures
 Subpart J: field testing
 Subpart K: definitions, references, and symbols

We propose to scale specifications for test equipment and measurement instruments by parameters such as engine power, engine speed and the emission standards to which an engine must comply. That way a single set of specifications will cover the full range of engine sizes and our full range of emission standards and our regulations will therefore specify equipment and instruments that are appropriate for a given engine size and emission standard. Manufacturers will be able to use these specifications to determine what range of engines and emission standards may be tested using a given laboratory or field testing system.

The new content that we are proposing for part 1065 is mostly a combination of content from our most recent updates to other test procedures and from test procedures specified by the International Organization for Standardization (ISO). In some cases, however, new content is proposed that never existed in previous regulations. This new content addresses very recent issues such as measuring very low concentrations of emissions, using new measurement technology, and performing field testing. A full description of the changes is in the Technical Support Document that accompanies this proposal (this document is available in the docket for this rulemaking).

The new content we are proposing also reflects a shift in our philosophy for specifying measurement performance. In the past we specified numerous calibration accuracies for individual measurement instruments, and we specified some performance checks for individual components, such as NO₂ to NO converters. We have shifted our focus away from individual instruments and toward the overall performance of complete measurement systems. We did this for several reasons. First, some of what we specified in the past precluded

the implementation of new measurement technologies. These new technologies, sometimes called "smart analyzers", combine signals from multiple instruments to compensate for interferences that were previously tolerable at higher emissions levels. These analyzers are useful for detecting low concentrations of emissions. They are also useful for detecting emissions from raw exhaust, which can contain high concentrations of interferences, such as water vapor. This is particularly important for field testing, which will most likely rely upon raw exhaust measurements. Second, this new "systems approach" challenges complete measurement systems with a series of periodic performance checks, which we feel will provide a more robust assurance that a measurement system as a whole is operating properly. Third, the systems approach provides a direct pathway to demonstrate that a field test system performs similarly to a laboratory system. This is explained in more detail in item 10., below. Finally, we feel that our systems approach will lead to a more efficient way of assuring measurement performance in the laboratory and in the field. We believe that this efficiency will stem from less frequent individual instrument calibrations, and higher confidence that a complete measurement system is operating properly.

We organized the new content relating to measurement performance into subparts C, D, F, and J. We specified measurement instruments in subpart C and periodic performance checks in subpart D. These two subparts apply to both laboratory and field testing. We organized content specific to laboratory testing in subpart F, and specific to field testing in subpart J.

In subpart C we specified the types of acceptable instruments, but we only recommend individual instrument performance. We provided these recommendations as guidance for procuring new instruments. We feel that the periodic performance checks that we required in subpart D will sufficiently evaluate the individual instruments as part of an overall measurement system. In subpart F we specified measurement performance validations that must be conducted as part of every laboratory test. In subpart J we specified similar measurement performance validations for field testing that must be conducted as part of every field test. We feel that the periodic performance checks in subpart D and the validations in subparts F and J that are required for every test ensure that complete measurement systems are operating properly.

In subpart J we also specified an additional overall performance check for a field test system. This check is a comprehensive comparison of a field test system versus a laboratory, and it may take several days of laboratory time to set up, run, and evaluate. We propose that this performance check must be performed at least once for a given make, model, and configuration of a field test system. We request comment on whether or not we should additionally require that this check be performed on every individual field test system at least once. We request comment on whether or not we should require the end-user of a field test system to perform this overall check. We believe that the performance checks in subpart D and the test validations in subpart J will ensure that an individual field test system is operating properly, however, we request comment on whether or not this comprehensive overall check must also be required to completely ensure proper operation of an individual field test system.

Below is a brief description of the content of each subpart, highlighting some of the new content.

1. Subpart A General Provisions

In Subpart A we identify the applicability of part 1065 and describe how procedures other than those in part 1065 may be used to comply with a standard-setting part. We specify that testing must be conducted in a way that represents in-use engine operation, such that in the rare case where provisions in part 1065 result in unrepresentative testing, other procedures would be used. In subpart A we indicate the conventions we use regarding units and certain measurements and we discuss recordkeeping. We also provide an overview of how emissions and other information are used to determine final emission results. The regulations in § 1065.15 include a figure illustrating the different ways we allow brake-specific emissions to be calculated.

In Subpart A we describe how continuous and batch sampling may be used to determine total emissions. We also describe the two ways of determining total work. Note that the figure indicates our default procedures and those procedures that would require additional approval before we would allow them for use.

2. Subpart B Equipment Specifications

Subpart B first describes engine and dynamometer related systems. Many of these specifications are scaled to an engine's size, speed, torque, exhaust flow rate, *etc.* We specify the use of in-use engine subsystems such as air intake

systems wherever possible in order to best represent in-use operation when an engine is tested in a laboratory.

Subpart B next describes sampling dilution systems. These include specifications for the allowable components, materials, pressures, and temperatures. We describe how to sample crankcase emissions. We also propose to allow limited use of partial-flow dilution for PM sampling. We request comment on whether or not our specifications for partial-flow dilution and our specifications for proportional-sampling validation (*i.e.*, § 1065.140(d) and § 1065.545) are sufficient for us to allow partial-flow dilution for all PM sampling without requiring alternate system approval.

Subpart B also specifies environmental conditions for PM filter stabilization and weighing. Although these provisions mostly come from our recent update to part 86, subpart N, we also describe some new aspects in detail.

The regulations in § 1065.101 include a diagram illustrating all the available equipment for measuring emissions.

3. Subpart C Measurement Instruments

Subpart C specifies the requirements for the measurement instruments used for testing. In subpart C we recommend accuracy, repeatability, noise, and response time specifications for individual measurement instruments, but note that we require that overall measurement systems meet the calibration and performance checks in Subpart D.

In some cases we allow new instrument types to be used where we previously did not allow them. For example, we propose to allow the use of a nonmethane cutter for NMHC measurement, we propose to allow the use of non-dispersive ultra-violet analyzers for NO_x measurement, we propose to allow the use of zirconia sensors for NO_x and O₂ measurement, we propose to allow various raw exhaust flow meters for laboratory and field testing measurement, and we propose to allow ultrasonic flow meters for CVS systems.

4. Subpart D Calibration and Performance Checks

Subpart D describes what we mean when we specify accuracy, repeatability and other performance parameters. We propose calibration and performance checks that scale with engine size and the emission standards to which an engine is certified. We propose to replace some of what we have called "calibrations" in the past with a series of performance checks, such as a

linearity check, that essentially checks the calibration of an instrument without specifying how the instrument must be initially calibrated. Because new instruments have built-in routines that linearize signals and compensate for various interferences, our typical calibration specifications sometimes conflicted with an instrument manufacturer's instructions. In addition we propose new performance checks in subpart D to ensure that the new instruments we specified in Subpart C are used correctly.

5. Subpart E Engine Selection, Preparation, and Maintenance

Subpart E describes how to select, prepare, and maintain a test engine. We updated these provisions to include both gasoline and diesel engines. This subpart is relatively short, and we did not make many changes to its original content.

6. Subpart F Test Protocols

Subpart F describes the step-by-step protocols for engine mapping, test cycle generation, test cycle validation, pre-test preconditioning, engine starting, emission sampling, and post-test validations. We propose an improved way to map and generate cycles for constant-speed engines. The constant-speed mapping procedure we propose better represents in-use engine operation. We propose a more streamlined set of test cycle and proportional validation criteria. We propose to allow modest corrections for noise and drift of emission analyzer signals within a certain range. We also propose a recommended procedure for weighing PM samples.

7. Subpart G Calculations and Required Information

Subpart G describes all of the calculations that are required in part 1065. We propose definitions of statistical quantities such as mean, standard deviation, slope, intercept, t-test, F-test, *etc.* By defining these quantities mathematically we intend to resolve any potential miscommunication when we discuss these quantities in other subparts. We propose all of the calculations for calibrations and emission calculations in international units to comply with 15 CFR 1170, which removes the voluntary aspect of the conversion to international units for Federal agencies. Furthermore, Executive Order 12770 (56 FR 35801, July 29, 1991) reinforces this policy by providing Presidential authority and direction for the use of the metric system of measurement by Federal agencies and departments. For our

standards that are not completely in international units (*i.e.* grams/horsepower-hour, grams/mile), we specify in part 1065 the correct use of internationally recognized conversion factors.

We also propose to calculate emissions based on molar quantities for flow rates, instead of volume or mass. This change eliminates the frequent confusion caused by the use of different reference points for standard pressure and standard temperature. Instead of declaring standard densities at standard pressure and standard temperature to convert volumetric concentration measurements to mass-based units, we declare molar masses for individual elements and compounds. Since these values are independent of all other parameters, they are known to be constant.

8. Subpart H Fuels, Fluids, and Analytical Gases

Subpart H specifies test fuels, lubricating oils and coolants, and analytical gases for testing. Because standard-setting parts for diesel engines now refer to part 1065, we are proposing diesel fuel specifications in part 1065. These fuel specifications are consistent with those previously adopted, with one exception. We propose to eliminate the Cetane Index specification for all diesel fuels because the existing specification for Cetane Number sufficiently determines the cetane levels of diesel test fuels. We propose to eliminate any detailed specification for service accumulation fuel. Instead, we propose that service accumulation fuel may be a commercially available in-use fuel. This change helps ensure that testing is representative of in-use engine operation. We propose to scale analytical gas specifications with the standards, which an engine must meet.

In addition, we request comment on whether or not we should consider revising our specifications for ultra low-sulfur diesel test fuel to reflect the expected lower distillation range relative to fuels with higher sulfur levels. We request comment on whether or not widening the distillation ranges by lowering the lower limit by 5 °C would better reflect in-use diesel fuels with sulfur concentrations below 15 ppm. The following table shows alternative distillation temperatures for ultralow-sulfur diesel test fuel, with the lower end of the distillation ranges lowered by 5 °C.

ALTERNATE DISTILLATION RANGE FOR ULTRA LOW-SULFUR DIESEL FUEL

Distillation range	Value
Initial Boiling Point	(166 to 204) °C.
10% point, °C	(199 to 238) °C.
50% point, °C	(238 to 282) °C.
90% point, °C	(288 to 332) °C.
End point, °C	(316 to 366) °C.

9. Subpart I Oxygenated Fuels

Subpart I describes special procedures for measuring certain hydrocarbons whenever oxygenated fuels are used. We updated the calculations for these procedures in Subpart G. This subpart is relatively short, and we did not make many changes to its original content. We request comment on whether or not we should provide additional guidance for testing with oxygenated fuels. For example, the regulations currently include a general reference to 40 CFR part 86 for sampling procedures related to oxygenated fuels. We request comment on the degree to which any specific provisions in part 86 should be included in Subpart I.

10. Subpart J Field Testing

Although Subpart J Field Testing existed prior to this proposal, we are proposing many changes to this subpart. We are proposing that in general, field testing equipment and measurement instruments meet the same specifications and performance checks that laboratory instruments must meet, according to subparts B, C, and D. However, for field testing instruments, we propose to allow certain deviations from the laboratory specifications. In addition to meeting many of the laboratory system requirements, we propose that a field test system meet an overall performance check versus a laboratory. This check involves repeating a duty cycle several times. The duty cycle itself must have several individual field test intervals (*e.g.*, NTE events) against which the field test system is compared to the laboratory system. This is a comprehensive check of the field test system. We also propose a procedure for preparing and conducting a field test, and we propose additional drift and noise allowances for emission analyzers. Given the evolving state of portable emissions measurement technology, the proposed field testing procedures provide for a number of known measurement techniques. We request comment on the relative efficacy of these approaches and/or the need to consider additional methods. We plan to expand on this topic in an upcoming memo to the docket.

11. Subpart K Definitions, References, and Symbols

In Subpart K we propose some new and revised definitions of vocabulary that we frequently use in part 1065. For example we have revised our definitions of “brake power”, “constant-speed engine”, and “aftertreatment” to provide more clarity, and we have added new definitions for things such as “300 series stainless steel”, “barometric pressure”, and “operator demand”. We propose definitions such as “duty cycle” and “test interval” to distinguish the difference between a single interval over which brake-specific emissions are calculated and the complete cycle over which emissions are evaluated in a laboratory. We also propose a thorough and consistent set of symbols, abbreviations, and acronyms. We propose to update our references to include references of the National Institute of Standards and Technology and the International Organization for Standardization (ISO).

II. Technical Amendments

A. Definitions and Penalties

We are proposing to revise several definitions that apply over more than one part of our regulations. These changes are designed to harmonize our regulations.

We are proposing to change the definition of Marine engine and Marine vessel to harmonize our approach to amphibious vehicles and clarify other issues. We have treated amphibious vehicles differently whether they had a diesel engine or a spark-ignition engine. We are proposing to harmonize our treatment of amphibious vehicles by consistently treating these as land-based products. We are also adding a provision defining amphibious vehicles are those that are designed primarily for operation on land to clarify that we don't consider hovercraft to be amphibious vehicles. See the Technical Support Document for additional information related to these definitions. In particular, note that we describe our interpretation of what it means for an engine to be “installed in a marine vessel.” Manufacturers have raised several questions related to this issue, especially as it relates to portable engines installed on barges.

We are also considering changes to the definition for Spark-ignition and Compression-ignition. We define Compression-ignition as relating to reciprocating internal-combustion engines that are not spark-ignition engines. We limit these definitions to reciprocating engines to avoid including gas turbines under the definition of

Compression-ignition. We currently do not have emission standards for gas turbines. A question has come up regarding how we should treat rotary engines, such as the Wankel engine. We request comment regarding whether the definition of Compression ignition should refer to "reciprocating and rotary engines" to clarify that rotary engines not meeting the definition for Spark-ignition engines would fall under our provisions for compression ignition engines.

We currently define Spark-ignition as follows:

Spark-ignition means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark-ignition engines usually use a throttle to regulate intake air flow to control power during normal operation.

This definition has left some confusion regarding natural gas engines that have a throttle, but perhaps do not clearly have operating characteristics that are significantly similar to the theoretical Otto combustion cycle. As an alternative, we are considering the following definition to remove this ambiguity:

Spark-ignition means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device). Engines that use diesel fuel are not spark-ignition engines.

Such a simple approach would be very clear, but could have the effect of defining some natural gas engines that have operating characteristics that are significantly similar to the theoretical diesel combustion cycle as spark-ignition engines. This may be appropriate, but it would represent a change from our existing policy for these engines. We are also considering another definition, as follows:

Spark-ignition means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics similar to the theoretical Otto combustion cycle. Spark-ignition engines usually burn a premixed charge of air and fuel. Engines that use diesel fuel are not spark-ignition engines.

This definition aims for consistency with the existing policy, but focuses on premixed combustion instead of the throttle to indicate whether natural gas engines are more appropriately regulated as compression-ignition or spark-ignition engines.

We welcome comment on all of these possible definitions of spark-ignition, as well as other possible approaches to this definition.

The Clean Air Act specifies maximum penalty amounts corresponding to each prohibited Act. These maximum penalty amounts are periodically adjusted for inflation, based on the provisions of the Debt Collection Improvement Act.

These maximum penalties have been updated under 40 CFR part 19. The new maximum penalties are \$32,500 for introducing noncompliant engines into commerce for manufacturers guilty of tampering, and \$2,750 for non-manufacturers guilty of tampering. In addition, the maximum penalty we can recover using administrative procedures is \$270,000. We are proposing to extend these revised penalties into each of our emission-control programs.

B. Nonroad General Compliance Provisions (40 CFR Part 1068)

In addition to the changing test procedures described above, we are proposing or considering changes that would affect multiple engine categories.

We are proposing several amendments to the provisions of 40 CFR part 1068, which currently apply to land-based nonroad diesel engines, recreational vehicles, and nonroad spark-ignition engines over 19 kW. We encourage manufacturers of other engines to take note of these changes, since we intend eventually to apply the provisions of part 1068 to all engines subject to EPA emission standards. Note that we are not requesting comment on the whole range of provisions in part 1068, but rather on those items that are included in this proposal. These changes include the following:

- Section 1068.10: Clarify confidentiality provisions to address how we treat information that we collect from on-site visits or testing, as opposed to information that manufacturers send to us.

- Section 1068.30: Add or correct definitions to coordinate with the standard-setting parts and clarify various terms.

- Section 1068.105: Expand paragraph (a) to better explain requirements for equipment manufacturers to use current model-year engines. This relates especially to the existing provision that allows equipment manufacturers to use up their normal inventories of engines from previous model years in cases where a new emission standard takes effect. We propose to change § 1068.101(a)(1) to reflect these changes.

- Section 1068.110: Clarify that the manufacturers' warranty obligation includes all expenses related to diagnosing and repairing or replacing emission-related parts. This is not intended to include incidental expenses

(such as replacement units during warranty service), consequential damage (such as damage caused by engine malfunction), or opportunity costs (such as foregone revenue from engine downtime).

- Section 1068.115: Add text to paragraph (a) to provide a complete list of reasons for manufacturers to deny warranty claims. This clarifies that the list of reasons given in paragraph (b) is descriptive, and is not intended to be comprehensive.

- Section 1068.245: Clarify that manufacturers applying for hardship must use the provisions of § 1068.250 (if applicable) before applying for hardship under § 1068.245. This is necessary to remove the ambiguity resulting from the current approach, which specifies that both §§ 1064.245 and 1068.250 are provisions of last resort.

- Section 1068.260: Clarify that including the cost of separately shipped components means that the cost of shipping must also be addressed.

- Section 1068.265: Add provisions that clarify what manufacturers must do when they are required to meet emission standards for engines that are not certified. A typical example would be an exemption that applies to new engines that replace an old engine that was certified to emission standards. We already require these engines to have the same degree of emission control as the replaced engine. We do not want manufacturers to certify these engines, but we are proposing to add requirements to clarify how manufacturers can show that the new engines meet an older set of emission standards. This involves either using an engine that is the same as one that was certified in an earlier model year, or performing tests to show that the engines meet the specified emission levels. In any case, manufacturers would not need to go through the process or pay the fees associated with certification. We recently adopted these same provisions for nonroad diesel engines and are proposing to extend them to the other engine categories covered by part 1068.

- Section 1068.315: Reduce the ownership requirement for the identical configuration exemption from one year to six months; also, change the qualifying criterion from "the same as" to "identical to."

- Section 1068.410: Add provisions allowing manufacturers to test engines up to three times total if an engine family reaches a fail decision under selective enforcement auditing, consistent with the provisions that apply under most of our programs.

- Section 1068.510: Clarify that manufacturers must describe the qualifications of repair personnel, rather than simply stating that they are qualified.

C. Land-based Nonroad Diesel Engines (40 CFR Parts 89 and 1039)

We recently adopted a new tier of emission standards for nonroad diesel engines, codifying these standards in 40 CFR part 1039. This rulemaking led us to make several regulatory changes to the existing tiers of standards for these engines in 40 CFR part 89. In cases where we discovered the need for changes after publishing the proposed rule, but we did not make those changes to part 89 in the final rule out of concern that the public had not had an opportunity for comment. Similarly, we are proposing some adjustments to part 1039, based on information that surfaced late in that rulemaking. We are proposing the following changes in part 89 and part 1039:

- Section 89.102: Clarify that equipment manufacturers using allowances under this section may use lower-emitting engines than we currently require.
- Section 89.110 and § 89.1009: Allow manufacturers to identify a different company's name and trademark on the emission control information label, with additional provisions to ensure that operators take certain steps to ensure that operators have the full benefit of the emission-related warranty.
- Section 89.130: Refer to the nearly identical provisions for rebuilding engines in § 1068.120.
- Section 89.410: Allow manufacturers to use ramped-modal testing, as specified for engines that must meet the Tier 4 standards.
- Appendix A to subpart F: Correct the ranges of values to address an unintentional gap for sales volumes between 300 and 500.
- Section 89.603: Clarify that standards applicable to Independent Commercial Importers (ICIs) are those of the year in which the imported engine was originally produced, for up to five engines per year. See the Technical Support Document and the discussion below related to highway engines and vehicles for additional information.
- Sections 89.913 and 89.914: Allow engine and equipment manufacturers to use the engine-dressing provisions in §§ 1039.605 and 1039.610.
- Section 89.1003: Clarify that engine manufacturers may ensure that the replaced engine is destroyed instead of taking possession of it; add a new label requirement for replacement engines

that are allowed to meet a less stringent set of standards that are in effect when the replacement engine is built (to address the case where the engine being replaced was subject to emission standards less stringent than the current standards).

- Section 89.1003: Clarify that violating the requirements to rebuild an engine to its original configuration is considered tampering with respect to the applicable penalties.
 - Section 89.1 and § 1039.5: Allow manufacturers to include marine auxiliary engines in an engine family certified under part 89 or 1039, subject to certain limitations.
 - Section 1039.1: Clarify that residence-time limits do not apply to engines used in stationary applications if they have been certified to nonroad emission standards.
 - Section 1039.104, 1039.625, and 1039.655: Change cross-reference from § 1039.260 to § 1068.265.
 - Section 1039.125: Clarify that a manufacturer's obligation to pay for scheduled maintenance under certain situations is limited to the useful life of the engine.
 - Section 1039.225: Include a modified FEL as the basis for a change to the application for certification, consistent with current practice.
 - Section 1039.240: Adding section references that were inadvertently omitted.
 - Section 1039.510: Remove provisions that are covered by part 1065.
 - Section 1039.605 and § 1039.610: Clarify the ABT responsibilities relative to engines or vehicles that are certified under the motor-vehicle program and used in nonroad applications.
 - Section 1039.705: Add a constraint for averaging, banking, and trading to prevent manufacturers from including credits earned in California if there would ever be a situation where they are required to meet separate standards in California (or another state).
 - Section 1039.740: Correct the provisions allowing the use of emission credits to from previous tiers of emission standards to include an item that was inadvertently omitted from the Tier 4 final rule, as described in the preamble to that final rule.
 - Section 1039.801: Update various definitions to reflect the change to move the full text of these definitions to part 1068.
- In the Tier 4 final rule, we adopted a revised provision allowing manufacturers to request a useful life shorter than that specified for engines generally. Our recent experience with a similar provision for marine diesel

engines has shown that it can be difficult to implement. The main difficulty relates to the extent and quality of the information manufacturers must supply to establish an alternate useful-life period. As a result, we are interested in changing this provision. A similar provision has been in place in part 89 since the beginning of emission standards, but we are not aware of anyone requesting a shorter useful life for any particular application. In the similar consideration of this provision for nonroad spark-ignition engines, the only manufacturers that we would expect to consider a shorter useful life would be for engines used in concrete saws, concrete pumps or similar severe-duty applications. To establish a shorter useful life for a set of engines, manufacturers would need to establish a separate engine family and pay the associated fees for certification. It is not clear that any manufacturer of nonroad diesel engines would make the extra effort or face the extra expense of segregating a family for a shorter useful life. We therefore request comment on removing this provision. We also request comment on the approach under consideration for spark-ignition engines, namely to remove the current approach of requesting a shorter useful life and replacing it with a useful life of 1500 hours for engines used in concrete saws, concrete pumps, and similar severe-duty engines. The useful life in years would be the same for all engines.

During the Tier 4 rulemaking, equipment manufacturers raised a concern regarding diesel engines certified to meet Tier 4 standards based on the use of catalyst technology relying on ultra low-sulfur fuel, where those engines are exported to countries with a higher sulfur content in diesel fuel. Many pieces of equipment may be designed and manufactured for the U.S. domestic market and eventually sold to an end-user that may use the equipment outside of the United States. The resulting damage to the emission-control system after extended exposure to the higher sulfur fuel could permanently reduce the effectiveness of emission controls. One possible solution would be to require that engines exported from the United States have the engine label and the aftertreatment removed before shipping the engine. This in effect invalidates the engine's certification, which would make it illegal to continue to use the engine in the United States, or to later import the engine back into the United States. Two potential drawbacks include reconciling the total balance of emission credits under the averaging, banking, and

trading program and reconciling the use of the engine in an existing flexibility program. Alternatively, we could require tracking engines and documenting end-use status once it has been placed in equipment. We seek comment on the use of such a provision to prevent re-importation of engines that are exposed to fuel sulfur levels that would be considered tampering if it occurred in the United States.

D. Marine Diesel Engines (40 CFR Part 94)

We are proposing several changes to our diesel marine engine program, in 40 CFR part 94. These changes are intended to clarify several aspects of the program. These changes, which are described in more detail in the Technical Support Document, are as follows:

- Section 94.2: Modify the definitions of "marine engine" and "marine vessel" and add a new definition of "amphibious vehicle" to clarify what kinds of amphibious vehicles are not considered marine vessels; modify the definition of "United States" to remove the reference to the Trust Territories of the Pacific Islands.

- Section 94.904: Allow the sale of an exempted or excluded engine if it is certified or identical to a certified engine.

- Section 94.907: Allow vessel manufacturers to take advantage of the engine dresser provisions; clarify the reporting requirement to specify that the total number of dressed engines produced by all companies dressing that base engine for use in a marine vessel is less than 50 percent of total annual sales for the base engine; add language clarifying the requirements related to generating and using emission credits with these engines.

- Section 94.912: Exempt marine auxiliary engines from the part 94 requirements as long as they are included in an engine family certified under part 1039 or 89, subject to certain limitations.

- Section 94.1001: Revise applicability to clarify that the provisions in Subpart K apply to manufacturers, owners, and operators of marine vessels that contain engines with per-cylinder displacement of at least 2.5 liters.

- Section 94.1103: Clarify that the engine manufacturer may ensure that the replaced engine is destroyed instead of taking possession of it; add a new label requirement for replacement engines that are allowed to meet a less stringent set of standards than are in effect when the replacement engine is built (to address the case where the

engine being replaced was subject to less stringent emission standards).

The Technical Support Document also clarifies the conditions under which an auxiliary engine used on a marine vessel will be considered a marine auxiliary engine and be subject to 40 CFR 94.

E. Small Nonroad Spark-Ignition Engines (40 CFR Part 90)

We are proposing to add a new section 90.913 to better define the responsibilities for manufacturers choosing to certify their engines below 19 kW to the emission standards for Large SI engines in 40 CFR part 1048. We are also revising section 90.1 to cross-reference provisions in parts 86, 1048, and 1051 that allow highway motorcycle engines and nonroad engines above 19 kW to meet the requirements in part 90 under certain conditions.

We have adopted a new approach to define maximum engine power in 40 CFR part 1039 for nonroad diesel engines for purposes of defining the applicability of standards. This definition includes a detailed procedure for determining this value. The current approach for Small SI engines is to rely on a definition of "gross power" that describes generally how to characterize an engine's maximum power. We request comment on adopting the new definition of maximum engine power in 40 CFR part 90. This would have the advantage of harmonizing our treatment of this basic tool to characterize engines and would allow for consistent treatment across programs. See the Technical Support Document for more information.

In addition, we are updating current references to test procedures in 40 CFR part 86 by pointing instead to 40 CFR part 1065. Manufacturers are also encouraged to review the proposed provisions in 40 CFR part 1065, since we intend eventually to apply those same procedures to Small SI engines. In particular, we have noted that the equations in § 90.426(b) and (d) for calculating mass flow rate and dilution factor differ from the comparable equations in part 1065, subpart G. We request comment on applying the equations from part 1065, subpart G, to Small SI engines for calculating these values.

F. Marine Spark-Ignition Engines (40 CFR Part 91)

We are proposing only minimal changes for marine SI engines in 40 CFR part 91. These changes are primarily to update current references to test procedures in 40 CFR part 86 by

pointing instead to 40 CFR part 1065. We are also updating various definitions, as described in Section II.A. Manufacturers are also encouraged to review the proposed provisions in 40 CFR part 1065, since we intend eventually to apply those same procedures to marine SI engines.

G. Large Nonroad Spark-Ignition Engines (40 CFR Part 1048)

We adopted emission standards for nonroad spark-ignition engines over 19 kW in November 2002 (67 FR 68242). The regulations in 40 CFR part 1048 were our first attempt to draft emission-control regulations in plain-language format. In the recent final rule for nonroad diesel engines, we went through a similar process, including extensive interaction with a different set of manufacturers. This process led us to adopt regulatory provisions in 40 CFR part 1039 that differ somewhat from those in part 1048. Since the process of meeting standards, applying for certificates, and complying with other emission-related requirements has a lot of commonality across programs, we have a strong interest in adopting consistent provisions and uniform terminology where possible. As a result, we are proposing extensive changes in part 1048 to align with the regulations in part 1039. Many of these changes reflect minor wording differences. The more significant changes to part 1048 include the following:

- Section 1048.105: Exclude marine fuel tanks from the standards for evaporative emissions. This is appropriate, because the fuel-hose requirements are incompatible with Coast Guard requirements and because we are developing a separate emission-control program that would apply to all fuel tanks associated with marine spark-ignition engines.

- Section 1048.135: Add a requirement for manufacturers to supply duplicate labels. This corresponds with the recently adopted provisions of 40 CFR 1068.105(c) that ensure that equipment manufacturers will take steps to prevent the misuse of duplicate labels.

- Section 1048.135: Allow manufacturers to identify a different company's name and trademark on the emission control information label, with additional provisions to ensure that manufacturers take certain steps to ensure that operators have the full benefit of the emission-related warranty.

- Section 1048.145: Add detailed provisions to the family-banking provisions to better define the qualifying criteria and the process for using this provision. For example, we

establish a date by which manufacturers must begin production of early-compliant engines to avoid giving credits for marginal early production, we clarify that the late-complying engines must continue to meet the Tier 1 standards, and we add a requirement that manufacturers report the number of engines they produce under this provision to allow us to verify compliance.

- Section 1048.310: Clarify that the maximum testing rate of 1 percent for production-line testing applies only after testing the minimum number of engines specified.

- Section 1048.501: Allow an optional procedure for measuring diurnal emissions from plastic fuel tanks. This addresses the fact that we intended to control diurnal emissions from fuel tanks, not permeation emissions. This will have minimal environmental impact, since plastic fuel tanks are rarely used with industrial spark-ignition engines. While we may consider adding permeation controls in the future, we are proposing to adopt procedures that would not require upgrades to plastic fuel tanks at this time.

- Section 1048.505: Allow manufacturers to use ramped-modal testing for simplified measurement of steady-state emission results. See the Technical Support Document for additional discussion or ramped-modal testing.

For discussion of additional changes, see the Technical Support Document.

In the November 2002 final rule, we adopted a provision allowing manufacturers to request a useful life shorter than that specified for engines generally. Our recent experience with a similar provision for marine diesel engines has shown that it can be difficult to implement. The main difficulty relates to the extent and quality of the information manufacturers must supply to establish an alternate useful-life period. As a result, we are interested in changing this provision. As far as we are aware, the only manufacturers that might reasonably consider a shorter useful life would be for engines used in severe-duty applications. To establish a shorter useful life for a set of engines, manufacturers would need to establish a separate engine family and pay the associated fees for certification. During the rulemaking, manufacturers of these engines suggested that their engines rarely operate longer than 1500 hours. We therefore request comment on removing the current approach of requesting a shorter useful life and replacing it with a useful life of 1500

hours for severe-duty engines. The useful life in years would be the same for all engines.

Starting in the 2007 model year, manufacturers must show that they meet emission standards over a transient duty cycle. The specified transient duty cycles were based on real-world operation from in-use engines. While these duty cycles were extensively tested with a variety of engines over the course of the rulemaking, we have learned that certain high-speed engines may not be able to sufficiently match the speed-load trace in the duty cycle to meet cycle-validation criteria. The cycle was developed with engines that were designed with governed speeds around 3000 rpm. For example, for engines with governed speeds of 3600 rpm or higher, the denormalized duty cycle may have exaggerated acceleration rates that exceed an engine's capability.² In this situation, manufacturers would be able to use a modified duty cycle under the provisions for special test procedures in 40 CFR 1065.10. We request comment on the need for using the provision for special test procedures to address this situation. We also request comment on whether it would be appropriate to make cycle-related adjustments in the regulation. This could take the form of relaxed values for cycle validation criteria, limits to cap acceleration rates, using different maximum-speed and maximum-torque values for denormalizing, or other approaches.

H. Recreational Vehicles (40 CFR Part 1051)

We are proposing to make several adjustments and clarifications to the regulations for recreational vehicles in part 1051, including the following:

- Clarify the characteristics for evaporative emission families to include items we inadvertently omitted from the November 2002 final rule, and make it clearer how evaporative and exhaust emission families relate to each other.

- Clarify the evaporative test procedures regarding steps to seal the fuel tank.

- Define "Fuel lines" to remove uncertainty related to which products are subject to permeation standards.

- Specify a maximum 8-hour time period between refueling and starting the permeation test run and clarify that extending permeation testing from two

²The prescribed duty cycle is a normalized sequence of speeds and loads expressed as a percentage of an engine's maximum values. Before testing, these percentage values must be denormalized into rpm and N-m values that are specific to the test engine based on its maximum speed and torque capabilities.

weeks to four weeks depends on establishing a linear change in emissions based on daily measurements.

- Clarify that youth-model ATVs and off-highway motorcycles count toward meeting the phase-in requirements.

- Remove the ATV FEL cap for carbon monoxide, which was inadvertently left in the final regulations.

- Specify that the warranty period may be based on hours of engine operation in addition to odometer readings.

- Allow rounding of Normalized Emission Rates to one decimal place, rather than to the nearest whole number, and adding additional equations for smaller engines.

- Change the minimum useful life for youth-model ATVs and off-highway motorcycles to 5,000 kilometers and 500 hours.

- Allow all ATVs certifying to J1088 to use the raw gas sampling provisions of Part 91 for engine testing through the 2008 model year, which was intended in the November 2002 final rule.

- Allows manufacturers to test engines based on an engine's maximum power if that better represents in-use operation, rather than using the specified procedure to establish maximum test speed.

- Adopt a speed threshold to exclude low-speed all-terrain vehicles from part 1051. For example, low-speed amphibious vehicles not meeting the definition of offroad utility vehicles would be covered by part 90 instead of part 1051.

These provisions are all discussed in more detail in the Technical Support Document. In addition, we request comment regarding whether it is appropriate to adopt a ramped-modal test method as an alternative for the steady-state tests applicable to recreational vehicles under § 1051.505 and § 1051.615. This is also discussed in more detail in the Technical Support Document.

We adopted emission standards for recreational vehicles in November 2002 (67 FR 68242). The regulations in 40 CFR part 1051 were our first attempt to draft emission-control regulations in plain-language format. In the recent final rule for nonroad diesel engines, we went through a similar process, including extensive interaction with a different set of manufacturers. This process led us to adopt regulatory provisions in 40 CFR part 1039 that differ from those in part 1051. Since the process of meeting standards, applying for certificates, and complying with other emission-related requirements has a lot of commonality across programs,

we have a strong interest in adopting consistent provisions and uniform terminology as much as possible. As a result, we are proposing extensive changes in part 1051 to align with the regulations in part 1039. Many of these changes reflect minor wording differences. The more significant changes to part 1051 include the following:

- Section 1051.135: Allow manufacturers to identify a different company's name and trademark on the emission control information label, with additional provisions to ensure that operators take certain steps to ensure that operators have the full benefit of the emission-related warranty.

- Section 1051.135: Add a requirement for manufacturers to supply duplicate labels. This corresponds with the recently adopted provisions of 40 CFR 1068.105(c) that ensure that equipment manufacturers will take steps to prevent the misuse of duplicate labels.

- Section 1051.135: Add a requirement to include the hang-tag label with normalized emission rates in the application for certification.

- Section 1051.225: For situations where the Family Emission Limit changes during a model year, the manufacturer calculates the credit balance for the family based on the FEL that applies for the corresponding production volume. This allows manufacturers to generate more credits (or use fewer credits), but this is consistent with the fact that manufacturers are liable for the emission-control performance of each engine relative to the FEL that applied at the point of production.

- Section 1051.501: Add "or add" in paragraph (b)(2) to clarify that the addition of fuel would not be allowed after the first weight measurement is taken in the permeation test run.

- Section 1051.705: Add a constraint for averaging, banking, and trading to prevent manufacturers from including credits earned in California if there would ever be a situation where they are required to meet separate standards in California (or another state).

- Section 1051.505 and 1051.615: We request comment on adding an option to allow manufacturers to conduct steady-state testing using ramped-modal cycles, as described in the Technical Support Document.

We request comment on all these changes to part 1051.

I. Locomotives (40 CFR Part 92)

We are proposing a variety of changes for our locomotive regulations in 40 CFR part 92 to make correct various

technical references and typographical errors. See the Technical Support Document and the proposed regulations for additional information.

In addition, we are requesting comment on a few additional items. The Engine Manufacturers Association recommended several revisions to the locomotive regulations.³ We are proposing many of these changes, and are requesting comment on those that we are not proposing. We are especially interested in comments related to EMA's request to revise the accuracy specifications found in §§ 92.104(b)(1)(i), 92.105(d), 92.106(b)(1)(ii), 92.107(a)(1), and 92.126(b)(3). These comments generally express a concern that the adopted specifications require too much precision or accuracy. We request further comment on the achievable level of precision and accuracy for these specifications, and on the degree to which we should change the specified values.

The standards for locomotive engines currently do not apply to engines used in locomotives if they have a maximum power below 750 kW. These engines are generally designed and manufactured for other applications, so they are excluded from locomotive standards and procedures. We have received a request that we allow engines below 750 kW that are used in locomotives to optionally certify to locomotive standards instead of the otherwise applicable requirements of 40 CFR part 89.⁴ This commenter suggested the following addition to the regulations in 40 CFR part 92:

The manufacturer or remanufacturer of a vehicle propelled by an engine rated less than 750 kW, but that otherwise meets all the requirements of this definition may elect to have it treated under this part rather than under part 89 by giving written notice of such election to the Administrator. All of the provisions of this part shall apply to vehicles for which such an election is made.

We continue to believe that engines below 750 kW should be regulated as nonroad diesel engines under part 89. However, we request comment on this suggestion to allow manufacturers to optionally meet the standards in part 92 instead. We also request comment

³ "Recommended Technical Amendments to EPA Tier 0/1/2 Locomotive Rule," Handout from the Engine Manufacturers Association, October 2003 (Docket #OAR-2004-0017-0002).

⁴ "Inclusion of the Railpower Green Goat Hybrid Locomotive 40 CFR 92 Averaging, Trading, and Banking" e-mail from Christopher Weaver, Railpower, May 7, 2004 (Docket #OAR-2004-0017-0003).

regarding the applicability of the line-haul emission standards to these low-power locomotive engines. Finally, we request comment on alternate calculations to address the equivalent tractive horsepower of hybrid locomotives.

J. Highway Engines and Vehicles (40 CFR Part 86)

1. Light-duty Vehicles

a. Calculation Method for Nonmethane Hydrocarbons. Text changes are proposed to properly align EPA and CARB calculation methods for measuring nonmethane hydrocarbons from gasoline, diesel, methanol, ethanol, and liquefied petroleum gas fueled light-duty vehicles. Harmonization of EPA and CARB testing and calculation practices, including proper accounting for the methane response of the total hydrocarbon FID, was anticipated when Tier 2 regulations were developed. Modifying the language in 86.121-90(d) and 86.144-94(c)(8)(vi) to explicitly require the use of a *measured* methane response factor, as opposed to the current CFR text which specifies an assumed methane response factor of 1.0, will align the calculation methods. Calculating nonmethane hydrocarbon using a measured methane response factor is the technically correct calculation and measurement method.

b. Correction to Tier 2 Regulations. On December 6, 2002, we made some minor technical amendments to EPA's Tier 2/Gasoline Sulfur regulations (67 FR 72821, December 6, 2002). However, those actions mistakenly reversed a prior correction to Table S04-2 in § 86.1811-04(c)(6) that was made on February 28, 2000 (65 FR 10598, February 28, 2000). We are now reestablishing the correct version of that table. Specifically, in § 86.1811-04(c)(6), in Table S04-2, the "Notes" entry corresponding with "Bin No. 9" should read "a b e f g h".

c. Correction to Supplemental Federal Test Procedure Regulations. We propose to make the following corrections to regulatory references, spelling, and the like with these technical amendments:

- An incorrect regulatory reference is corrected in section 86.158-00;
- Revision to section 86.161-00 inserts the correct humidity tolerance of plus-or-minus 5 grains of water/pound of dry air; and
- Revision to the equation in section 86.164-00 adds plus ("+") signs that were omitted in the regulations.

d. Correction to National Low Emission Vehicle Regulations. In several places in the National Low Emission Vehicle (NLEV) emissions standards

there are typographical errors affecting emission standards and testing provisions which require correction:

- Incorrect in-use formaldehyde standards for light-duty vehicles in tables R99-5 and R99-6 (§ 86.1708-99).
- Incorrect model year applicability of in-use standards for light-duty trucks (§ 86.1709-99(c)(1)).
- Missing standards for light-duty trucks from 0-3750 loaded vehicle weight in Table R99-14.2 (§ 86.1709-99).
- Correction of fleet average NMOG standards for calculating credits for 1997 and 1998 model years in the Northeast Trading Region (§ 86.1710-99(c)(8)).
- Correcting a reference to 86.1705-99(e)(4) that should have been to 86.1707-99(d)(4) (§ 86.1711-99).

2. Highway Motorcycles

a. Highway Motorcycle Labeling Requirements. On January 15, 2004, we finalized new emission standards for highway motorcycles (69 FR 2398, January 15, 2004). These new standards are implemented in two stages: a "Tier 1" that is effective in the 2006 through 2009 model years, and a "Tier 2" that takes effect starting with the 2010 model year. These standards are generally harmonized with California emission standards that take effect two years earlier. Under the new standards, Class III motorcycles must comply with a new HC+NO_x emission standard on a corporate average basis. This new flexibility allows manufacturers to market motorcycles that produce more pollution than the designated average standard as long as they are balanced out by sales of less-polluting models such that the manufacturers' sales-weighted corporate average remains below the standard. Averaging is also optionally allowed for Class I and II motorcycles.

Since publishing the final rule, however, we realized that the labeling language for highway motorcycles is not helpful in the context of the new averaging standard. The current federal labeling language (see 40 CFR 86.413-78) only requires that a motorcycle label indicate compliance with EPA standards for a given model year. This is all that is needed when there is no uncertainty regarding what the applicable emission standards are. In the context of the type of averaging program we finalized, however, the manufacturers essentially choose their own emission standard (up to a cap) for each engine family. The manufacturer-selected emission standard is known as a "Family Emission Limit," or FEL. For example, a manufacturer with two

engine families might market one meeting a standard of 2.2 grams/mile HC+NO_x and another one meeting a standard of 0.5 grams/mile HC+NO_x. If these are equally-selling engine families, then the manufacturer will meet the required Tier 1 average of 1.4 grams/mile HC+NO_x.

In the case described above, a label with only the model year will not provide adequate information regarding the applicable emission standard. Historically both EPA and ARB have required labels that identify the specific applicable FEL for vehicles certified under averaging programs. Therefore, we are amending the labeling requirements with two goals in mind. First, the label must provide sufficient information regarding the applicable emission standard and model year, as well as specific tune-up information. Second, the label requirements should be aligned with ARB to the greatest degree possible to prevent a situation where the manufacturer has to apply two labels to a motorcycle to meet two different sets of requirements. The new labeling language in 40 CFR 86.413-2006 accomplishes both of these goals.

b. Highway Motorcycle Fuel Specifications. In our final rule setting new emission standards for highway motorcycles (69 FR 2398, January 15, 2004) we updated the fuel specifications for motorcycle emission testing to be consistent with the fuel specifications finalized on February 10, 2000, as part of our "Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Requirements" (65 FR 6697, February 10, 2000). This was necessary to ensure that motorcycles are tested using fuels consistent with those available in the marketplace. We received no negative comments on making this change. It is necessary at this time to correct some errors that were made in updating the motorcycle test fuel specification. The specific corrections are:

- Changing the volume percent of aromatics from "35 minimum" to "35 maximum";
- Changing the phosphorous g/liter specification from 0.005 g/liter to 0.0013 g/liter (the alternative specification is 0.005 g/U.S. gallon);
- Changing the sulfur weight percent from 0.08 maximum to 0.008 maximum; and
- Changing the volatility test procedure from "ASTM D 3231" to "ASTM D 323."

c. Highway Motorcycles with engines below 50 cc. We are proposing modified language in § 86.447 and § 86.448 to clarify various aspects of the provision allowing manufacturers to use products certified to nonroad emission standards

instead of the standards for highway motorcycles under part 86. These changes include the following:

- Clarify the requirement related to the number of engines that may be certified under nonroad programs.
- Define the requirements related to generating and using emission credits with these engines.
- Add language to better define the legal responsibilities for companies involved in producing motorcycles under this provision.

3. Heavy-Duty Highway Engines

As discussed above, we are proposing to adopt the lab-testing and field-testing specifications in part 1065 for heavy-duty highway engines, including both diesel and Otto-cycle engines. These procedures replace those currently published in 40 CFR part 86 subpart N. We are proposing a gradual transition from the part 86 procedures over a period of two model years in order to fully migrate to part 1065, no later than model year 2008. Manufacturers would not need to conduct new testing if they are able to use carryover data, but any new testing for 2008 and later model years would be done using the part 1065 procedures. Migrating heavy-duty highway engines to the part 1065 procedures allows us to include all the testing-related improvements in the HD2007 rule, including those we have adopted through guidance.⁵ In addition, part 1065 incorporates revisions based on updated procedures for sampling low concentrations of PM.

We are also proposing to require manufacturers to use ramped-modal testing to show that they meet steady-state emission standards using the Supplemental Emissions Test (SET), which will be required for model year 2007 and later engines. The conventional approach for steady-state testing is to measure emissions separately for each mode. Ramped-modal testing involves a single, continuous emission measurement as the engine operates over the test modes in a defined sequence, including short transition segments between modes. Ramped-modal testing offers several advantages, primarily that of increased accuracy for measuring very low levels of PM emissions. See the Technical Support Document for additional information on the advantages of ramped-modal testing.

We are also clarifying that certain data requirements related to Supplemental Emission Testing are required only

⁵ "Guidance Regarding Test Procedures for Heavy-Duty On-Highway and Non-Road Engines," December 3, 2002.

when engines are subject to Maximum Allowable Emission Limits.

Part 1065 bases the denormalized duty cycle on "maximum test speed," which differs somewhat from the traditional approach from part 86 of relying on rated speed. We request comment on whether or not we need to adjust how maximum test speed is applied to heavy-duty highway diesel engines to better represent in-use operation. Specifically, we request comment on whether or not we should specify that maximum test speed should be equal to the 112% speed from the duty cycle for this particular sequence. This would shift the prescribed speeds that are in excess of 100% speed to be no greater than 99.92% of maximum test speed. This adjustment would prevent excessive speeds, while ensuring our intent to specify maximum test speed to test an engine over its complete operating range.

We are proposing a minor adjustment to the phase-in process for the HD2007 standards to allow manufacturers to make their compliance demonstration either on the basis of model years or calendar years. This increases the flexibility for manufacturers to define their model year without affecting their ability to show that they meet their phase-in obligations. Because the phase-in period is three years under either approach, we believe this adjustment would not harm the environmental objectives of the program.

In the recently finalized Nonroad Diesel Tier 4 final rule, we included new regulatory provisions allowing engine manufacturers to ship engines and aftertreatment separately to equipment manufacturers, provided several criteria were met (69 FR 39308, June 29, 2004). These criteria were based on two main principles. First, the engine manufacturer is responsible to ensure that equipment manufacturers are fully aware of their responsibilities for proper installation of the engine and catalyst system. Second, the engine manufacturer has the primary responsibility for ensuring the engine and catalyst are properly installed. While the engine manufacturer has the primary responsibility, we may also find the equipment manufacturer liable under certain circumstances. We request comment on applying similar provisions to allow separate shipment of engines and aftertreatment for heavy-duty highway engine manufactures, including both gasoline and diesel engines. In addition, we request information that would indicate to what extent the heavy-duty highway engine/catalysts/vehicle manufacturer business relationships are similar to those for

nonroad diesel engines, and whether the same provisions should apply to the companies producing highway engines and vehicles as we have adopted for the nonroad diesel engines and equipment.

We are taking this opportunity to clarify an aspect of the information reporting requirements described in a recently proposed rule making for manufacturer in-use testing of heavy-duty vehicles. The Notice of Proposed Rule Making (NPRM) for the manufacturer-run in-use testing program (FR Cite) was issued June 3, 2004. Section K in the preamble provides a non-exhaustive example of the types of engine parameters commonly stored in the engine's on-board computer and requires manufacturers to report those parameters which are readily available. We want to be clear that not only should those parameters be reported to EPA, but that they also must be reported to and stored by any portable emissions measurement system used to meet the testing requirements described in the NPRM. Because the proposed regulatory language in 40 CFR part 1065, subpart J contained in today's notice does not contain all of the parameters we intended to be required in the manufacturer in-use testing program, we expect that section 86.1920(a)(4)(xii) in the final in-use testing regulations will contain language that will better reflect this intent and make explicit the types of parameters that may be subject to the reporting requirements. Specifically, the current language in 86.1920(a)(4)(xii) states:

Recorded one-hertz test data for all the parameters specified in 40 CFR part 1065, subpart J, including any other relevant parameters electronically sensed, measured, calculated, or otherwise stored by the engine's onboard computer. This also includes any parameters used to modulate the emission-control system.

The final language would state:

Recorded one-hertz test data for all the parameters specified in 40 CFR part 1065, subpart J, and any other relevant parameters electronically sensed, measured, calculated, or otherwise stored by the engine's onboard computer, including but not limited to engine speed, engine torque, engine coolant temperature, intake manifold temperature, manifold absolute pressure, barometric pressure (altitude), ambient temperature, brake specific fuel consumption, exhaust temperature upstream of aftertreatment, and elapsed time, any parameter needed to demonstrate the engine is within the NTE or an approved carve-out or deficiency region. The one-hertz test data must also include any parameters used to modulate the emission-control system.

We request comment on this revision.

Similarly, Subpart K of the preamble requests comment on the whether

engine manufacturers should be required to design the on-board engine computer to explicitly identify when an engine is operating in an approved NTE carve-out or deficiency. We want to make clear that the request for comment also more broadly covers whether the engine's on-board computer should identify when the engine is operating within the NTE. Under the proposal, manufacturers are required, at a minimum, to provide information from the engine's on-board computer or some other readily available source that will enable EPA to make these NTE determinations.

4. Importation of Nonconforming Highway Engines and Vehicles

The Agency is proposing revisions to 40 CFR part 85, subpart P regarding the applicable emission standards for imported nonconforming highway vehicles and engines, including light-duty vehicles (passenger cars), light-duty trucks, heavy-duty vehicles, heavy-duty engines, and motorcycles. This proposal clarifies that these nonconforming vehicles and engines are required to meet the emission standards in effect when the vehicle or engine was originally produced, not the emission standards in effect when the vehicle or engine is modified. This approach is consistent with the requirements for light-duty Independent Commercial Importers (ICIs) which have been in effect since 1996 (61 FR 5842, February 14, 1996).

Most of the issues related to this proposal were previously addressed in the 1996 rule. An excerpt from that 1996 rule provides a brief summary of the basis for this proposal. Section I.A of the 1996 final rule reads in part:

As proposed, EPA is eliminating the requirement that nonconforming light-duty vehicles and Light-duty trucks imported pursuant to 40 CFR 85.1501 or 85.1509 meet the part 86 emission standards in effect at the time of modification. These vehicles, with a few exceptions, will instead be required to meet emission standards (with applicable deterioration factors applied) that were in effect at the time of original vehicle production, using currently applicable testing procedures.

The specific standards applicable to these vehicles are contained in a new § 85.1515 * * *.

As discussed in the proposal (Supplementary Document pp. 27-28, Docket No. A-89-20), when EPA promulgated the prior requirement to meet standards applicable at the time of modification, the Agency had no data or evidence suggesting that older vehicles could not be modified to meet current year emission standards. Since that rulemaking, EPA has obtained evidence suggesting that many older vehicles cannot be modified to meet current year standards

without extraordinary cost, which makes the conversion financially unfeasible for many owners of such vehicles. Today's rule would give owners of older vehicles a way to import their vehicles. In addition, it would have been significantly more difficult and costly for importers to modify vehicles to comply with the current model year standards beginning in January, 1996, when the standards applicable to small volume manufacturers became substantially more stringent. EPA agrees with the statements submitted by ICIs after the close of the comment period that the expense of such modifications would have a serious deleterious effect on their businesses and would not justify the costs.

Although the intent of the 1996 rule was clear, we are proposing to make regulation changes to make the regulation language consistent with the intent of the 1996 rule. The 1996 final rule added 40 CFR 85.1515, which provided a list of the emission standards applicable to imported light-duty vehicles and light-duty trucks based on the original production (OP) year of the vehicle. Tables 1 and 2 in 40 CFR 85.1515 correctly indicate that the emission standards applicable for pre-1994 imported light-duty vehicles and light-duty trucks are based on the original production year of the vehicle. Tables 1 and 2 also correctly indicate (in a footnote) that 1994 and later imported light-duty vehicles and light-duty trucks are required to meet the applicable emission standards as "Specified in 40 CFR part 86 for the OP year of the vehicle, per 85.1515(c)." However § 85.1515(c)(1) incorrectly indicates that "Nonconforming motor vehicles or motor vehicle engines of 1994 OP model year and later conditionally imported pursuant to § 85.1505 or § 85.1509 shall meet all of the emission standards specified in 40 CFR part 86 for the model year in which the motor vehicle or motor vehicle engine *is modified*." (emphasis added)

This ambiguity in the regulations was unfortunately not corrected after the 1996 rule changes became effective. Nor was it corrected when Interim non-Tier 2 and Tier 2 requirements were adopted for import vehicles (65 FR 6698, February 10, 2000). Although the 2000 rulemaking did not intend to change the highway engine or vehicle importation process, the regulations continued to indicate that nonconforming motor vehicles and motor vehicle engines must meet the emission standards in the model year in which the motor vehicle or motor vehicle engine is modified; see 40 CFR 85.1515(c)(2)(ii) through (d). We have now received several petitions from light duty ICIs to correct the regulations to permit vehicles imported by ICIs to meet OP year standards.

In summary, for the reasons discussed in the provisions of 61 FR 5842, February 14, 1996, we are proposing changes to correct the regulations for nonconforming highway vehicles so they are consistent with the intent of the 1996 final rule. This proposal will require imported highway vehicles to meet the emission standards in effect the year the vehicle was *originally produced*, not the emission standards in effect in the year the vehicle or engine *is modified*. We are, however, concerned that ICI provisions which apply OP year standards could be used as a way to circumvent our Tier 2 light duty standards and our new more stringent motorcycle standards. Thus we are proposing to cap each ICI's annual production of vehicles meeting OP year standards when OP year standards are less stringent than the standards that apply during the year of modification. We are proposing a cap of a total of 50 light duty vehicles and trucks and 50 motorcycles. This does not impact the number of vehicles an ICI may produce that are certified to the standards that apply during the year of modification.

While we have never had an ICI for highway HDEs, we are also proposing, consistent with the above, to make clear that the applicable standards for HDEs imported by an ICI would be those of the year of original production. For HDEs, we are proposing an annual cap of five on an ICI's production of engines certified to OP year standards that are less stringent than those that apply during the year of modification. This will address the possibility that ICIs could provide an avenue by which truck purchasers could avoid the additional costs of new trucks with engines meeting aftertreatment-based engine standards. We are proposing a similar amendment for nonroad diesel engines, as described elsewhere in this document.

We believe it is appropriate to have different caps on the quantity of vehicles and engines that can be certified to OP year standards, where OP year standards are less stringent than those that apply during the year of modification. The sales of light-duty vehicles and trucks are many times greater than those of heavy-duty highway engines and nonroad diesel engines combined. Further, we believe that the caps for light-duty vehicles, light-duty trucks, and motorcycles should be larger than those for nonroad and highway engines to accommodate an industry that has grown up around the light-duty ICI program. The light-duty and motorcycle ICIs can provide additional consumer choice and also provide an avenue by which (for a price)

someone who has lived outside of the United States, including returning U.S. military personnel, can bring a used personal vehicle they acquired overseas into conformity with U.S. emission requirements. No such ICI industry exists for highway or nonroad engines. Where OP year standards are applied to highway and nonroad engines, we are proposing a lower cap. We believe it will be appropriate to limit the activities of engine ICIs, when previous model year engines are involved, to those specialized trucks or pieces of equipment for which demand is so low that normal certification didn't occur or might not occur. While we want to provide an opportunity for the importation of highly specialized vehicles or equipment that might otherwise be unavailable in the United States, we do not want to develop an industry that simply provides older equipment that would most likely be built with engines meeting significantly less stringent standards.

5. Revisions and Corrections to Dynamometer Driving Schedules

a. SC03 and US06 driving cycles. This rule proposes to correct errors in the SC03 driving cycle and to reconcile several discrepancies between the CFR language and the second-by-second US06 and SC03 drive cycle traces in the appendices to part 86.

The SC03 cycle in Appendix I, paragraph (h) is proposed to be lengthened to 600 seconds by the addition of six seconds of zero miles per hour after 594 seconds. This change and additional language changes would eliminate confusion in how to execute the requirements in sections 86.160-00(c)(12) and 86.159-00(f)(2)(ix). Sections 86.159-00(f)(2)(ix) and 86.160-00(c)(12) both state that the engine is turned off 2 seconds after the end of the deceleration (which occurs at 594 seconds and driving stops at 596 seconds).

With respect to the SC03 drive trace, section 86.160-00(c)(10) reads "Twenty seconds after the engine starts, begin the initial vehicle acceleration of the driving schedule." However, this is incorrect. The printed driving schedule in Appendix I, paragraph (h), correctly shows eighteen seconds of idle. The regulatory language is proposed to be modified to reflect eighteen seconds of idle, rather than twenty.

Section 86.160-00(c)(12) currently reads "Turn the engine off 2 seconds after the end of the last deceleration," but the Appendix I, paragraph (h), drive schedule has no idle seconds at the end of the SC03 cycle. Idle speed values are proposed to be added to the end of the

SC03 drive schedule to make it consistent with the regulatory language. The impact of these changes would clarify that the first non-zero speed value to be at trace time t=19 seconds. This section is proposed to be amended to clarify that driving stops at trace time t=596 seconds.

The US06 drive schedule has a similar discrepancy. Section 86.159-00(f)(2)(ix) reads "Turn the engine off 2 seconds after the end of the last deceleration." However, the drive schedule in Appendix I (g) has six idle seconds at the end of the US06 cycle. We proposed to amend this section to clarify that driving stops at trace time t=596 seconds.

b. Urban Dynamometer Driving Schedule. We are also proposing to take action to correct two minor errors in the Appendix I, paragraph (a), Urban Dynamometer Driving Schedule (UDDS) that have existed since the 1970's. Originally published in the **Federal Register** on November 10, 1970 (35 FR 17311), the UDDS is the driving cycle that is the basis of the Federal Test Procedure. Since it was published, however, two speed values in the UDDS were erroneously modified. Specifically, the speed value at t=961 seconds was changed from 5.3 mph to 5.0 mph in 1972, and the speed value at t=1345 seconds was changed from 18.3 mph to 18.8 sometime between 1973 and 1977. The speed value of 5.0 mph at t=961 creates an acceleration of 3.6 mph/sec to 8.6 mph at t=962, which is inconsistent with the acknowledged 3.3 mph/sec maximum acceleration rate due to dynamometer limitations. The speed value of 18.8 mph at t=1345 is inconsistent with what should be a gradually decreasing acceleration rate from t=1343 to t=1347 seconds. This rule proposes to revert these values back to the speed values as they were published in 1970. It is important to note that the regulated industry and EPA have been using the correct speed values since 1970, despite the error in the Code of Federal Regulations (CFR).

In addition, a dynamometer manufacturer commented to EPA that the CFR has several errors in the Appendix I, paragraph (b), version of the UDDS that is expressed in kilometers per hour. EPA has verified that these errors are not rounding errors when converting from miles per hour, but are more likely the result of errors in typing. The table below indicates the correct mile per hour and kilometer per hour values, as well as the incorrect value. This rule proposes to make these corrections.

Time (seconds)	Incorrect KPH	Correct KPH	Correct MPH
363	52.3	52.8	32.8
405	14.5	14.8	9.2
453	31	31.9	19.8
491	55.8	55.5	34.5
577	21.4	27.4	17.0
662	43.9	42.0	26.1
663	43.1	42.2	26.2
664	42.3	42.2	26.2
932	40.3	40.2	25.0

III. Public Participation

We request comment on all aspects of this proposal. The comment period for this rule will end on October 29, 2004.

We will hold an informal public workshop on October 1, 2004 at the National Vehicle and Fuel Emissions Laboratory, which is located at 2000 Traverwood Drive, Ann Arbor, Michigan 48105. The workshop will start at 9 a.m. with an opportunity for any individuals to raise questions or comments related to the proposed technical amendments. Following this, the rest of the day will be devoted to discussions of the proposed changes to the test procedures in 40 CFR part 1065.

If you would like a public hearing in addition to the planned workshop, contact us by September 20, 2004 as described above in **DATES**. If a public hearing is requested, we will hold it on September 27, 2004 starting at 9 a.m. EDT. Contact us for updated information about the possibility of a public hearing.

If you would like to present testimony at a public hearing, we ask that you notify the contact person listed above at least ten days beforehand. You should estimate the time you will need for your presentation and identify any needed audio/visual equipment. We suggest that you bring copies of your statement or other material for the EPA panel and the audience. It would also be helpful if you send us a copy of your statement or other materials before the hearing.

We will arrange for a written transcript of the hearing and keep the official record of the hearing open for 30 days to allow you to submit supplementary information. You may make arrangements for copies of the transcript directly with the court reporter.

IV. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 the Agency must determine whether the regulatory action is "significant" and therefore subject to review by the Office of Management and Budget (OMB) and

the requirements of this Executive Order. The Executive Order defines a "significant regulatory action" as any regulatory action that is likely to result in a rule that may:

- Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, Local, or Tribal governments or communities;

- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Because the rule merely revises the measurement methods and makes a variety of technical amendments to existing programs, it is not a significant regulatory action and is not subject to the requirements of Executive Order 12866. Any new costs associated with this rule will be minimal. In addition, some of the changes will substantially reduce the burden associated with testing, as described in the Regulatory Support Document.

B. Paperwork Reduction Act

This rule does not include any new collection requirements, as it merely revises the measurement methods and makes a variety of technical amendments to existing programs.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this final rule on small entities, a small entity is defined as: (1) A small business as defined by the Small Business Administration (SBA) by category of business using North America Industrial Classification System (NAICS) and codified at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or

special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The small entities directly regulated by this proposed rule are small businesses that produce nonroad engines. We have determined that no small entities will experience more than incidental costs as a result of this rule. This rule merely revises the measurement methods and makes a variety of technical amendments to existing programs. This proposed rule, therefore, does not require a regulatory flexibility analysis.

Although this proposed rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. For example, most of the proposed changes clarify existing requirements, which will reduce the time needed to comply, and added flexibility, which may allow for a simpler effort to comply.

We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "federal mandates" that may result in expenditures to state, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the

Administrator publishes with the final rule an explanation of why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

This rule contains no federal mandates for state, local, or tribal governments as defined by the provisions of Title II of the UMRA. The rule imposes no enforceable duties on any of these governmental entities. Nothing in the rule would significantly or uniquely affect small governments. We have determined that this rule contains no federal mandates that may result in expenditures of more than \$100 million to the private sector in any single year. This rule merely revises the measurement methods and makes a variety of technical amendments to existing programs. The requirements of UMRA therefore do not apply to this action.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under Section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State

law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

Section 4 of the Executive Order contains additional requirements for rules that preempt State or local law, even if those rules do not have federalism implications (*i.e.*, the rules will not have substantial direct effects on the States, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government). Those requirements include providing all affected State and local officials notice and an opportunity for appropriate participation in the development of the regulation. If the preemption is not based on express or implied statutory authority, EPA also must consult, to the extent practicable, with appropriate State and local officials regarding the conflict between State law and Federally protected interests within the agency's area of regulatory responsibility.

This proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications."

This rule does not have tribal implications as specified in Executive Order 13175. This rule will be implemented at the Federal level and impose compliance costs only on engine manufacturers and ship builders. Tribal governments will be affected only to the extent they purchase and use equipment with regulated engines. Thus, Executive Order 13175 does not apply to this rule.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that (1) is determined to be "economically

significant” as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, Section 5–501 of the Order directs the Agency to evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This proposed rule is not subject to the Executive Order because it does not involve decisions on environmental health or safety risks that may disproportionately affect children.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This rule is not a “significant energy action” as defined in Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use” (66 FR 28355 (May 22, 2001)), because it is not likely to have a significant effect on the supply, distribution, or use of energy.

I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (“NTTAA”), Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rule involves technical standards. The International Organization for Standardization (ISO) has a voluntary consensus standard that can be used to test engines. However, the test procedures in this proposal reflect a level of development that goes substantially beyond the ISO or other published procedures. The proposed procedures incorporate new specifications for transient emission measurements, measuring PM emissions at very low levels, measuring emissions using field-testing procedures. The procedures we adopt in this rule will form the working template for ISO and

national and state governments to define test procedures for measuring engine emissions. As such, we have worked extensively with the representatives of other governments, testing organizations, and the affected industries.

EPA welcomes comments on this aspect of the proposed rulemaking.

V. Statutory Provisions and Legal Authority

Statutory authority for the engine controls proposed today can be found in 42 U.S.C. 7401–7671q.

List of Subjects

40 CFR Part 85

Confidential business information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Research, Warranties.

40 CFR Part 86

Administrative practice and procedure, Confidential business information, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements.

40 CFR Part 89

Environmental protection, Administrative practice and procedure, Confidential business information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Research, Vessels, Warranties.

40 CFR Part 90

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Labeling, Reporting and recordkeeping requirements, Research, Warranties.

40 CFR Part 91

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Labeling, Penalties, Reporting and recordkeeping Requirements, Warranties

40 CFR Part 92

Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Labeling, Railroads, Reporting and recordkeeping requirements, Warranties

40 CFR Part 94

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Incorporation by reference, Penalties,

Reporting and recordkeeping requirements, Vessels, Warranties.

40 CFR Part 1039, 1048, and 1051

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Incorporation by reference, Labeling, Penalties, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 1065

Environmental protection, Administrative practice and procedure, Incorporation by reference, Reporting and recordkeeping requirements, Research.

40 CFR Part 1068

Environmental protection, Administrative practice and procedure, Confidential business information, Imports, Motor vehicle pollution, Penalties, Reporting and recordkeeping requirements, Warranties.

Dated: August 16, 2004.

Michael O. Leavitt,
Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is proposed to be amended as follows:

PART 85—CONTROL OF AIR POLLUTION FROM MOBILE SOURCES

1. The authority citation for part 85 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

2. Section 85.1502 is amended by revising paragraph (a)(14) to read as follows:

§ 85.1502 Definitions.

(a) * * *

(14) *United States.* United States includes the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

* * * * *

3. Section 85.1503 is amended by revising the section heading and adding paragraphs (c), (d), and (e) to read as follows:

§ 85.1503 General requirements for importation of nonconforming vehicles and engines.

* * * * *

(c) In any one certificate year (e.g., the current model year), an ICI may finally admit no more than the following numbers of nonconforming vehicles or engines into the United States under the provisions of § 85.1505 and § 85.1509,

except as allowed by paragraph (e) of this section:

(1) 5 heavy-duty engines.

(2) A total of 50 light-duty vehicles, light-duty trucks, and medium-duty passenger vehicles.

(3) 50 highway motorcycles.

(d) For ICIs owned by a parent company, the importation limits in paragraph (c) of this section include importation by the parent company and all its subsidiaries.

(e) An ICI may exceed the limits outlined in paragraphs (c) and (d) of this section, provided that any vehicles/engines in excess of the limits meet the emission standards and other requirements outlined in the provisions of § 85.1515 for the model year in which the motor vehicle/engine is modified (instead of the emission standards and other requirements applicable for the OP year of the vehicle/engine).

4. Section 85.1513 is amended by revising paragraph (d) to read as follows:

§ 85.1513 Prohibited acts; penalties.

* * * * *

(d) Any importer who violates section 203(a)(1) of the Act is subject to a civil penalty under section 205 of the Act of not more than \$32,500 for each vehicle or engine subject to the violation. In addition to the penalty provided in the Act, where applicable, under the exemption provisions of § 85.1511(b), or under § 85.1512, any person or entity who fails to deliver such vehicle or engine to the U.S. Customs Service is liable for liquidated damages in the amount of the bond required by applicable Customs laws and regulations.

* * * * *

5. Section 85.1515 is amended by revising paragraphs (c)(1) and (c)(2) to read as follows:

§ 85.1515 Emission standards and test procedures applicable to imported nonconforming motor vehicles and motor vehicle engines.

* * * * *

(c)(1) Nonconforming motor vehicles or motor vehicle engines of 1994 OP model year and later conditionally imported pursuant to § 85.1505 or § 85.1509 shall meet all of the emission standards specified in 40 CFR part 86 for the OP year of the vehicle or motor vehicle engine. At the option of the ICI, the nonconforming motor vehicle may comply with the emissions standards in 40 CFR 86.1708–99 or 86.1709–99, as applicable to a light-duty vehicle or light light-duty truck, in lieu of the otherwise applicable emissions standards specified in 40 CFR part 86

for the OP year of the vehicle. The provisions of 40 CFR 86.1710–99 do not apply to imported nonconforming motor vehicles. The useful life specified in 40 CFR part 86 for the OP year of the motor vehicle or motor vehicle engine is applicable where useful life is not designated in this subpart.

(2)(i) Nonconforming light-duty vehicles and light light-duty trucks (LDV/LLDTs) originally manufactured in OP years 2004, 2005 or 2006 must meet the FTP exhaust emission standards of bin 9 in Tables S04–1 and S04–2 in 40 CFR 86.1811–04 and the evaporative emission standards for light-duty vehicles and light light-duty trucks specified in 40 CFR 86.1811–01(e)(5).

(ii) Nonconforming LDT3s and LDT4s (HLDTs) and medium-duty passenger vehicles (MDPVs) originally manufactured in OP years 2004 through 2006 must meet the FTP exhaust emission standards of bin 10 in Tables S04–1 and S04–2 in 40 CFR 86.1811–04 and the applicable evaporative emission standards specified in 40 CFR 86.1811–04(e)(5). For 2004 OP year HLDTs and MDPVs where modifications commence on the first vehicle of a test group before December 21, 2003, this requirement does not apply to the 2004 OP year. ICIs opting to bring all of their 2004 OP year HLDTs and MDPVs into compliance with the exhaust emission standards of bin 10 in Tables S04–1 and S04–2 in 40 CFR 86.1811–04, may use the optional higher NMOG values for their 2004–2006 OP year LDT2s and 2004–2008 LDT4s.

(iii) Nonconforming LDT3s and LDT4s (HLDTs) and medium-duty passenger vehicles (MDPVs) originally manufactured in OP years 2007 and 2008 must meet the FTP exhaust emission standards of bin 8 in Tables S04–1 and S04–2 in 40 CFR 86.1811–04 and the applicable evaporative standards specified in 40 CFR 86.1811–04(e)(5).

(iv) Nonconforming LDV/LDTs originally manufactured in OP years 2007 and later and nonconforming HLDTs and MDPVs originally manufactured in OP years 2009 and later must meet the FTP exhaust emission standards of bin 5 in Tables S04–1 and S04–2 in 40 CFR 86.1811–04, and the evaporative standards specified in 40 CFR 86.1811(e)(1) through (e)(4).

(v) ICIs are exempt from the Tier 2 and the interim non-Tier 2 phase-in intermediate percentage requirements for exhaust, evaporative, and refueling emissions described in 40 CFR 86.1811–04.

(vi) In cases where multiple standards exist in a given model year in 40 CFR

part 86 due to phase-in requirements of new standards, the applicable standards for motor vehicle engines required to be certified to engine-based standards are the least stringent standards applicable to the engine type for the OP year.

* * * * *

6. Section 85.2111 is amended by revising the introductory text and adding paragraph (d) to read as follows:

§ 85.2111 Warranty enforcement.

The following acts are prohibited and may subject a manufacturer to up to a \$32,500 civil penalty for each offense, except as noted in paragraph (d) of this section:

* * * * *

(d) The maximum penalty value listed in this section is shown for calendar year 2004. Maximum penalty limits for later years may be adjusted based on the Consumer Price Index. The specific regulatory provisions for changing the maximum penalties, published in 40 CFR part 19, reference the applicable U.S. Code citation on which the prohibited action is based.

7. Appendix II to subpart V is amended by revising section 1 of part A to read as follows:

Appendix II to Subpart V of Part 85—Arbitration Rules

Part A—Pre-Hearing

Section 1: Initiation of Arbitration

Either party may commence an arbitration under these rules by filing at any regional office of the American Arbitration Association (the AAA) three copies of a written submission to arbitrate under these rules, signed by either party. It shall contain a statement of the matter in dispute, the amount of money involved, the remedy sought, and the hearing locale requested, together with the appropriate administrative fee as provided in the Administrative Fee Schedule of the AAA in effect at the time the arbitration is filed. The filing party shall notify the MOD Director in writing within 14 days of when it files for arbitration and provide the MOD Director with the date of receipt of the bill by the part manufacturer.

Unless the AAA in its discretion determines otherwise and no party disagrees, the Expedited Procedures (as described in Part E of these Rules) shall be applied in any case where no disclosed claim or counterclaim exceeds \$32,500, exclusive of interest and arbitration costs. Parties may also agree to the Expedited Procedures in cases involving claims in excess of \$32,500.

All other cases, including those involving claims not in excess of \$32,500 where either party so desires, shall be administered in accordance with Parts A through D of these Rules.

PART 86—CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY VEHICLES AND ENGINES

8. The authority citation for part 86 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

9. Section 86.004–16 is amended by revising paragraph (d) to read as follows:

§ 86.004–16 Prohibition of defeat devices.

* * * * *

(d) For vehicle and engine designs designated by the Administrator to be investigated for possible defeat devices:

(1) *General.* The manufacturer must show to the satisfaction of the Administrator that the vehicle or engine design does not incorporate strategies that reduce emission control effectiveness exhibited during the applicable Federal emissions test procedures when the vehicle or engine is operated under conditions which may reasonably be expected to be encountered in normal operation and use, unless one of the specific exceptions set forth in the definition of “defeat device” in § 86.004–2 has been met.

(2) *Information submissions required.* The manufacturer will provide an explanation containing detailed information (including information which the Administrator may request to be submitted) regarding test programs, engineering evaluations, design specifications, calibrations, on-board computer algorithms, and design strategies incorporated for operation

both during and outside of the applicable Federal emission test procedure.

10. Section 86.004–26 is amended by revising paragraph (c)(4) to read as follows:

§ 86.004–26 Mileage and service accumulation; emission measurements.

* * * * *

(c) * * *

(4) The manufacturer shall determine, for each engine family, the number of hours at which the engine system combination is stabilized for emission-data testing. The manufacturer shall maintain, and provide to the Administrator if requested, a record of the rationale used in making this determination. The manufacturer may elect to accumulate 125 hours on each test engine within an engine family without making a determination. Any engine used to represent emission-data engine selections under § 86.094–24(b)(2) shall be equipped with an engine system combination that has accumulated at least the number of hours determined under this paragraph. Complete exhaust emission tests shall be conducted for each emission-data engine selection under § 86.094–24(b)(2). Evaporative emission controls must be connected, as described in 40 CFR part 1065, subpart F. The Administrator may determine under § 86.094–24(f) that no testing is required.

* * * * *

11. Section 86.007–11 is amended by revising paragraphs (a)(2) and (a)(3)(i)

and adding paragraph (g)(6) to read as follows:

§ 86.007–11 Emission standards and supplemental requirements for 2007 and later model year heavy-duty engines and vehicles.

* * * * *

(a) * * *

(2) The standards set forth in paragraph (a)(1) of this section refer to the exhaust emitted over the duty cycle specified in paragraphs (a)(2)(i) through (iii) of this section, where exhaust emissions are measured and calculated as specified in paragraphs (a)(2)(iv) and (v) of this section in accordance with the procedures set forth in 40 CFR part 1065, except as noted in § 86.007–23(c)(2):

(i) Perform the test interval set forth in paragraph (f)(2) of Appendix I of this part with a cold-start according to 40 CFR part 1065, subpart F. This is the cold-start test interval.

(ii) Shut down the engine after completing the test interval and allow 20 minutes to elapse. This is the hot-soak.

(iii) Repeat the test interval. This is the hot-start test interval.

(iv) Calculate the total emission mass of each constituent, *m*, and the total work, *W*, over each test interval according to 40 CFR 1065.650.

(v) Determine your engine’s brake-specific emissions using the following calculation, which weights the emissions from the cold-start and hot-start test intervals:

$$\text{brake - specific emissions} = \frac{m_{\text{cold-start}} + 6 \cdot m_{\text{hot-start}}}{W_{\text{cold-start}} + 6 \cdot W_{\text{hot-start}}}$$

(3) * * *

(i) Exhaust emissions, as determined under § 86.1360–2007(b) pertaining to the supplemental emission test cycle, for each regulated pollutant shall not exceed 1.0 times the applicable emission standards or FELs specified in paragraph (a)(1) of this section.

* * * * *

(g) * * *

(6) Manufacturers may determine the number of engines and vehicles that are allowed to certify to the NO_x plus NMHC standard in § 86.004–11 based on calendar years 2007, 2008, and 2009, rather than model years 2007, 2008, and 2009.

* * * * *

12. Section 86.007–21 is amended by revising paragraph (o) to read as follows:

§ 86.007–21 Application for certification.

* * * * *

(o) For diesel heavy-duty engines, the manufacturer must provide the following additional information pertaining to the supplemental emission test conducted under § 86.1360–2007:

(1) Weighted brake-specific emissions data (*i.e.*, in units of g/bhp-hr), calculated according to 40 CFR 1065.650 for all pollutants for which an emission standard is established in § 86.004–11(a) or subsequent sections;

(2) For engines subject to the MAEL (*see* § 86.007–11(a)(3)(ii)), brake specific gaseous emission data for each of the 12 non-idle test points (identified under § 86.1360–2007(b)(1)) and the 3 EPA-selected test points (identified under § 86.1360–2007(b)(2));

(3) For engines subject to the MAEL (*see* § 86.007–11(a)(3)(ii)), concentrations and mass flow rates of all regulated gaseous emissions plus carbon dioxide;

(4) Values of all emission-related engine control variables at each test point;

(5) Weighted break-specific particulate matter (*i.e.*, in units of g/bhp-hr);

(6) A statement that the test results correspond to the test engine selection criteria in 40 CFR 1065.401. The manufacturer also must maintain records at the manufacturer’s facility which contain all test data, engineering analyses, and other information which provides the basis for this statement, where such information exists. The manufacturer must provide such

information to the Administrator upon request;

(7) For engines subject to the MAEL (see § 86.007–11(a)(3)(ii)), a statement that the engines will comply with the weighted average emissions standard and interpolated values comply with the Maximum Allowable Emission Limits specified in § 86.007–11(a)(3) for the useful life of the engine where applicable. The manufacturer also must maintain records at the manufacturer's facility which contain a detailed description of all test data, engineering analyses, and other information which provides the basis for this statement, where such information exists. The manufacturer must provide such information to the Administrator upon request.

* * * * *

PART 86—[AMENDED]

13. Part 86 is amended by removing the first § 86.008–10, which was added on October 6, 2000.

14. Section 86.084–2 is amended by revising the definition for “Curb-idle” to read as follows:

§ 86.084–2 Definitions.

* * * * *

Curb-idle means:

(1) For manual transmission code light-duty trucks, the engine speed with the transmission in neutral or with the clutch disengaged and with the air conditioning system, if present, turned off. For automatic transmission code light-duty trucks, curb-idle means the engine speed with the automatic transmission in the Park position (or Neutral position if there is no Park position), and with the air conditioning system, if present, turned off.

(2) For manual transmission code heavy-duty engines, the manufacturer's recommended engine speed with the clutch disengaged. For automatic transmission code heavy-duty engines, curb idle means the manufacturer's recommended engine speed with the automatic transmission in gear and the output shaft stalled. (Measured idle speed may be used in lieu of curb-idle speed for the emission tests when the difference between measured idle speed and curb idle speed is sufficient to cause a void test under 40 CFR 1065.530 but not sufficient to permit adjustment in accordance with 40 CFR part 1065, subpart E.

* * * * *

15. Section 86.096–38 is amended by revising paragraph (g)(19)(iii) to read as follows:

§ 86.096–38 Maintenance instructions.

* * * * *

(g) * * *

(19) * * *

(iii) Any person who violates a provision of this paragraph (g) shall be subject to a civil penalty of not more than \$32,500 per day for each violation. This maximum penalty is shown for calendar year 2004. Maximum penalty limits for later years may be set higher based on the Consumer Price Index, as specified in 40 CFR part 19. In addition, such person shall be liable for all other remedies set forth in Title II of the Clean Air Act, remedies pertaining to provisions of Title II of the Clean Air Act, or other applicable provisions of law.

16. Section 86.121–90 is amended by revising paragraph (d) introductory text to read as follows:

§ 86.121–90 Hydrocarbon analyzer calibration.

* * * * *

(d) *FID response factor to methane.*

When the FID analyzer is to be used for the analysis of gasoline, diesel, methanol, ethanol, liquefied petroleum gas, and natural gas-fueled vehicle hydrocarbon samples, the methane response factor of the analyzer must be established. To determine the total hydrocarbon FID response to methane, known methane in air concentrations traceable to the National Institute of Standards and Technology (NIST) must be analyzed by the FID. Several methane concentrations must be analyzed by the FID in the range of concentrations in the exhaust sample. The total hydrocarbon FID response to methane is calculated as follows:

$$r_{CH_4} = FID_{ppm} / SAM_{ppm}$$

Where:

* * * * *

17. Section 86.144–94 is amended by revising paragraph (c)(8)(vi) to read as follows:

§ 86.144–94 Calculations; exhaust emissions.

* * * * *

(c) * * *

(8) * * *

(vi) r_{CH_4} = HC FID response to methane as measured in § 86.121(d).

* * * * *

18. Section 86.158–00 is amended by revising the introductory text to read as follows:

§ 86.158–00 Supplemental Federal Test Procedures; overview.

The procedures described in §§ 86.158–00, 86.159–00, 86.160–00, and 86.162–00 discuss the aggressive driving (US06) and air conditioning (SC03) elements of the Supplemental Federal Test Procedures (SFTP). These

test procedures consist of two separable test elements: A sequence of vehicle operation that tests exhaust emissions with a driving schedule (US06) that tests exhaust emissions under high speeds and accelerations (aggressive driving); and a sequence of vehicle operation that tests exhaust emissions with a driving schedule (SC03) which includes the impacts of actual air conditioning operation. These test procedures (and the associated standards set forth in subpart S of this part) are applicable to light-duty vehicles and light-duty trucks.

* * * * *

19. Section 86.159–00 is amended by revising paragraph (f)(2)(ix) to read as follows:

§ 86.159–00 Exhaust emission test procedure for US06 emissions.

* * * * *

(f) * * *

(2) * * *

(ix) Turn the engine off 2 seconds after the end of the last deceleration (i.e., engine off at 596 seconds).

* * * * *

20. Section 86.160–00 is amended by revising the first sentence of paragraph (a), and paragraphs (c)(10), (c)(12), (d)(10), and (d)(13) to read as follows:

§ 86.160–00 Exhaust emission test procedure for SC03 emissions.

(a) *Overview.* The dynamometer operation consists of a single, 600 second test on the SC03 driving schedule, as described in appendix I, paragraph (h), of this part. * * *

* * * * *

(c) * * *

(10) Eighteen seconds after the engine starts, begin the initial vehicle acceleration of the driving schedule.

* * * * *

(12) Turn the engine off 2 seconds after the end of the last deceleration (i.e., engine off at 596 seconds).

* * * * *

(d) * * *

(10) Turn the engine off 2 seconds after the end of the last deceleration (i.e., engine off at 596 seconds).

* * * * *

(13) Immediately after the end of the sample period, turn off the cooling fan, disconnect the exhaust tube from the vehicle tailpipe(s), and drive the vehicle from dynamometer.

* * * * *

21. Section 86.161–00 is amended by revising paragraph (b)(1) to read as follows:

§ 86.161-00 Air conditioning environmental test facility ambient requirements.

* * * * *

(b) * * *

(1) Ambient humidity is controlled, within the test cell, during all phases of the air conditioning test sequence to an average of 100 +/-5 grains of water/pound of dry air.

* * * * *

22. Section 86.164-00 is amended by revising paragraph (c)(1)(i) introductory text to read as follows:

§ 86.164-00 Supplemental federal test procedure calculations.

* * * * *

(c)(1) * * *

(i) $Y_{WSFTP} = 0.35(Y_{FTP}) + 0.37(Y_{SCO3}) + 0.28(Y_{US06})$

Where:

* * * * *

23. A new § 86.413-2006 is added to read as follows:

§ 86.413-2006 Labeling.

(a)(1) The manufacturer of any motorcycle shall, at the time of manufacture, affix a permanent, legible label, of the type and in the manner described below, containing the information hereinafter provided, to all production models of such vehicles available for sale to the public and covered by a certificate of conformity.

(2) A permanent, legible label shall be affixed in a readily accessible position. Multi-part labels may be used.

(3) The label shall be affixed by the vehicle manufacturer who has been issued the certificate of conformity for such vehicle, in such a manner that it cannot be removed without destroying or defacing the label, and shall not be affixed to any part which is easily detached from the vehicle or is likely to be replaced during the useful life of the vehicle.

(4) The label shall contain the following information lettered in the English language in block letters and numerals, which shall be of a color that contrasts with the background of the label:

(i) The label heading shall read: "Vehicle Emission Control Information";

(ii) Full corporate name and trademark of the manufacturer;

(iii) Engine displacement (in cubic centimeters or liters) and engine family identification;

(iv) Engine tuneup specifications and adjustments, as recommended by the manufacturer, including, if applicable: idle speed, ignition timing, and the idle air-fuel mixture setting procedure and value (e.g., idle CO, idle air-fuel ratio,

idle speed drop). These specifications shall indicate the proper transmission position during tuneup, and which accessories should be in operation and which systems should be disconnected during a tuneup;

(v) Any specific fuel or engine lubricant requirements (e.g., lead content, research octane number, engine lubricant type);

(vi) Identification of the exhaust emission control system, using abbreviations in accordance with SAE J1930, June 1993, including the following abbreviations for items commonly appearing on motorcycles:

OC Oxidation catalyst;
TWC Three-way catalyst;
AIR Secondary air injection (pump);
PAIR Pulsed secondary air injection
DFI Direct fuel injection;
O2S Oxygen sensor;
HO2S Heated oxygen sensor;
EM Engine modification;
CFI Continuous fuel injection;
MFI Multi-port (electronic) fuel injection;
and
TBI Throttle body (electronic) fuel injection.

(viii) An unconditional statement of conformity to U.S. EPA regulations which includes the model year; for example, "This Vehicle Conforms to U.S. EPA Regulations Applicable to _____ Model Year New Motorcycles" (the blank is to be filled in with the appropriate model year). For all Class III motorcycles and for Class I and Class II motorcycles demonstrating compliance with the averaging provisions in 40 CFR 86.449 the statement must also include the phrase "is certified to an HC+NO_x emission standard of _____ grams/mile" (the blank is to be filled in with the Family Emission Limit determined by the manufacturer).

(b) The provisions of this section shall not prevent a manufacturer from also reciting on the label that such vehicle conforms to any other applicable Federal or State standards for new motorcycles or any other information that such manufacturer deems necessary for, or useful to, the proper operation and satisfactory maintenance of the vehicle.

24. Section 86.447-2006 is revised to read as follows:

§ 86.447-2006 What provisions apply to motorcycle engines below 50 cc that are certified under the Small SI program or the Recreational-vehicle program?

(a) *General provisions.* If you are an engine manufacturer, this section allows you to introduce into commerce a new highway motorcycle (that is, a motorcycle that is a motor vehicle) if it has an engine below 50 cc that is already certified to the requirements

that apply to engines or vehicles under 40 CFR part 90 or 1051 for the appropriate model year. If you comply with all the provisions of this section, we consider the certificate issued under 40 CFR part 90 or 1051 for each engine or vehicle to also be a valid certificate of conformity under this part 86 for its model year, without a separate application for certification under the requirements of this part 86. See § 86.448-2006 for similar provisions that apply to vehicles that are certified to chassis-based standards under 40 CFR part 1051.

(b) *Vehicle-manufacturer provisions.* If you are not an engine manufacturer, you may produce highway motorcycles using nonroad engines below 50 cc under this section as long as the engine has been properly labeled as specified in paragraph (d)(5) of this section and you do not make any of the changes described in paragraph (d)(2) of this section. If you modify the nonroad engine in any of the ways described in paragraph (d)(2) of this section for installation in a highway motorcycle, we will consider you a manufacturer of a new highway motorcycle. Such engine modifications prevent you from using the provisions of this section.

(c) *Liability.* Engines for which you meet the requirements of this section, and vehicles containing these engines, are exempt from all the requirements and prohibitions of this part, except for those specified in this section. Engines and vehicles exempted under this section must meet all the applicable requirements from 40 CFR part 90 or 1051. This applies to engine manufacturers, vehicle manufacturers who use these engines, and all other persons as if these engines were used in recreational vehicles or other nonroad applications. The prohibited acts of 40 CFR part 85 apply to these new highway motorcycles; however, we consider the certificate issued under 40 CFR part 90 or 1051 for each engine to also be a valid certificate of conformity under this part 86 for its model year. If we make a determination that these engines do not conform to the regulations during their useful life, we may require you to recall them under 40 CFR part 86, 90, or 1068.

(d) *Specific requirements.* If you are an engine manufacturer and meet all the following criteria and requirements regarding your new engine, the highway motorcycle is eligible for an exemption under this section:

(1) Your engine must be below 50 cc and must be covered by a valid certificate of conformity for Class II engines issued under 40 CFR part 90 or

for recreational vehicles under 40 CFR part 1051.

(2) You must not make any changes to the certified engine that could reasonably be expected to increase its exhaust emissions for any pollutant, or its evaporative emissions, if applicable. For example, if you make any of the following changes to one of these engines, you do not qualify for this exemption:

(i) Change any fuel system or evaporative system parameters from the certified configuration.

(ii) Change, remove, or fail to properly install any other component, element of design, or calibration specified in the engine manufacturer's application for certification. This includes aftertreatment devices and all related components.

(iii) Modify or design the engine cooling system so that temperatures or heat rejection rates are outside the original engine manufacturer's specified ranges.

(3) You must show that fewer than 50 percent of the engine model's total sales for the model year, from all companies, are used in highway motorcycles, as follows:

(i) If you are the original manufacturer of the engine, base this showing on your sales information.

(ii) In all other cases, you must get the original manufacturer of the engine to confirm this based on its sales information.

(4) You must ensure that the engine has the label we require under 40 CFR part 90 or 1051.

(5) You must add a permanent supplemental label to the engine in a position where it will remain clearly visible after installation in the equipment. In the supplemental label, do the following:

(i) Include the heading: "HIGHWAY MOTORCYCLE ENGINE EMISSION CONTROL INFORMATION".

(ii) Include your full corporate name and trademark. You may instead include the full corporate name and trademark of another company you choose to designate.

(iii) State: "THIS ENGINE WAS ADAPTED FOR HIGHWAY USE WITHOUT AFFECTING ITS EMISSION CONTROLS."

(iv) State the date you finished installation (month and year), if applicable.

(6) Send the Designated Compliance Officer a signed letter by the end of each calendar year (or less often if we tell you) with all the following information:

(i) Identify your full corporate name, address, and telephone number.

(ii) List the engine models you expect to produce under this exemption in the coming year.

(iii) State: "We produce each listed engine model for nonroad application without making any changes that could increase its certified emission levels, as described in 40 CFR 1048.605."

(e) *Failure to comply.* If your highway motorcycles do not meet the criteria listed in paragraph (d) of this section, they will be subject to the standards, requirements, and prohibitions of this part 86 and the certificate issued under 40 CFR part 90 or 1051 will not be deemed to also be a certificate issued under this part 86. Introducing these engines into commerce without a valid exemption or certificate of conformity under this part violates the prohibitions in 40 CFR part 85.

(f) *Data submission.* We may require you to send us emission test data on any applicable nonroad duty cycles.

(g) *Participation in averaging, banking and trading.* Engines adapted for recreational use under this section may not generate or use emission credits under this part 86. These engines may generate credits under the ABT provisions in 40 CFR part 90 or 1051. These engines must use emission credits under 40 CFR part 90 or 1051 if they are certified to an FEL that exceeds an applicable standard.

25. Section 86.448–2006 is revised to read as follows:

§ 86.448–2006 What provisions apply to vehicles certified under the Recreational-vehicle program?

(a) *General provisions.* If you are a highway-motorcycle manufacturer, this section allows you to introduce into commerce a new highway motorcycle with an engine below 50 cc if it is already certified to the requirements that apply to recreational vehicles under 40 CFR parts 1051. A highway motorcycle is a motorcycle that is a motor vehicle. If you comply with all of the provisions of this section, we consider the certificate issued under 40 CFR part 1051 for each recreational vehicle to also be a valid certificate of conformity for the motor vehicle under this part 86 for its model year, without a separate application for certification under the requirements of this part 86. See § 86.447–2006 for similar provisions that apply to nonroad engines produced for highway motorcycles.

(b) *Nonrecreational-vehicle provisions.* If you are not a recreational-vehicle manufacturer, you may produce highway motorcycles from recreational vehicles with engines below 50 cc under this section as long as the highway motorcycle has the labels specified in

paragraph (d)(5) of this section and you do not make any of the changes described in paragraph (d)(2) of this section. If you modify the recreational vehicle or its engine in any of the ways described in paragraph (d)(2) of this section for installation in a highway motorcycle, we will consider you a manufacturer of a new highway motorcycle. Such modifications prevent you from using the provisions of this section.

(c) *Liability.* Vehicles for which you meet the requirements of this section are exempt from all the requirements and prohibitions of this part, except for those specified in this section. Engines and vehicles exempted under this section must meet all the applicable requirements from 40 CFR part 1051. This applies to engine manufacturers, vehicle manufacturers, and all other persons as if the highway motorcycles were recreational vehicles. The prohibited acts of 40 CFR part 85 apply to these new highway motorcycles; however, we consider the certificate issued under 40 CFR part 1051 for each recreational vehicle to also be a valid certificate of conformity for the highway motorcycle under this part 86 for its model year. If we make a determination that these engines or vehicles do not conform to the regulations during their useful life, we may require you to recall them under 40 CFR part 86 or 40 CFR 1068.505.

(d) *Specific requirements.* If you are a recreational-vehicle manufacturer and meet all the following criteria and requirements regarding your new highway motorcycle and its engine, the highway motorcycle is eligible for an exemption under this section:

(1) Your motorcycle must have an engine below 50 cc and it must be covered by a valid certificate of conformity as a recreational vehicle issued under 40 CFR part 1051.

(2) You must not make any changes to the certified recreational vehicle that we could reasonably expect to increase its exhaust emissions for any pollutant, or its evaporative emissions if it is subject to evaporative-emission standards. For example, if you make any of the following changes, you do not qualify for this exemption:

(i) Change any fuel system parameters from the certified configuration.

(ii) Change, remove, or fail to properly install any other component, element of design, or calibration specified in the vehicle manufacturer's application for certification. This includes aftertreatment devices and all related components.

(iii) Modify or design the engine cooling system so that temperatures or

heat rejection rates are outside the original vehicle manufacturer's specified ranges.

(3) You must show that fewer than 50 percent of the total sales as a highway motorcycle or a recreational vehicle, from all companies, are used in highway motorcycles, as follows:

(i) If you are the original manufacturer of the vehicle, base this showing on your sales information.

(ii) In all other cases, you must get the original manufacturer of the vehicle to confirm this based on their sales information.

(4) The highway motorcycle must have the vehicle emission control information we require under 40 CFR part 1051.

(5) You must add a permanent supplemental label to the highway motorcycle in a position where it will remain clearly visible. In the supplemental label, do the following:

(i) Include the heading: "HIGHWAY MOTORCYCLE ENGINE EMISSION CONTROL INFORMATION".

(ii) Include your full corporate name and trademark. You may instead include the full corporate name and

trademark of another company you choose to designate.

(iii) State: "THIS VEHICLE WAS ADAPTED FOR HIGHWAY USE WITHOUT AFFECTING ITS EMISSION CONTROLS."

(iv) State the date you finished modifying the vehicle (month and year), if applicable.

(6) Send the Designated Compliance Officer a signed letter by the end of each calendar year (or less often if we tell you) with all the following information:

(i) Identify your full corporate name, address, and telephone number.

(ii) List the highway motorcycle models you expect to produce under this exemption in the coming year.

(iii) State: "We produced each listed highway motorcycle without making any changes that could increase its certified emission levels, as described in 40 CFR 86.448-2006."

(e) *Failure to comply.* If your highway motorcycles do not meet the criteria listed in paragraph (d) of this section, they will be subject to the standards, requirements, and prohibitions of this part 86 and 40 CFR part 85, and the certificate issued under 40 CFR part

1051 will not be deemed to also be a certificate issued under this part 86. Introducing these motorcycles into commerce without a valid exemption or certificate of conformity under this part violates the prohibitions in 40 CFR part 85.

(f) *Data submission.* We may require you to send us emission test data on the duty cycle for Class I motorcycles.

(g) *Participation in averaging, banking and trading.* Recreational vehicles adapted for use as highway motorcycles under this section may not generate or use emission credits under this part 86. These engines may generate credits under the ABT provisions in 40 CFR part 1051. These engines must use emission credits under 40 CFR part 1051 if they are certified to an FEL that exceeds an applicable standard.

25a. In § 86.513-2004, Table 1 in paragraph (a)(1) is amended to read as follows:

§ 86.513-2004 Fuel and engine lubricant specifications.

* * * * *
(a) * * *
(1) * * *

TABLE 1 OF § 86.513-2004.—GASOLINE TEST FUEL SPECIFICATIONS

Item	Procedure	Value
Distillation Range:		
1. Initial boiling point, °C	ASTM D 86-97	1 23.9-35.0
2. 10% point, °C	ASTM D 86-97	48.9-57.2
3. 50% point, °C	ASTM D 86-97	93.3-110.0
4. 90% point, °C	ASTM D 86-97	148.9-162.8
5. End point, °C	ASTM D 86-97	212.8
Hydrocarbon composition:		
1. Olefins, volume %	ASTM D 1319-98	10 maximum.
2. Aromatics, volume %	ASTM D 1319-98	35 maximum.
3. Saturates	ASTM D 1319-98	Remainder.
Lead (organic), g/liter	ASTM D 3237	0.013 maximum.
Phosphorous, g/liter	ASTM D 3231	0.0013 maximum.
Sulfur, weight %	ASTM D 1266	0.008 maximum.
Volatility (Reid Vapor Pressure), kPa	ASTM D 323	1 55.2 to 63.4.

¹For testing at altitudes above 1,219 m, the specified volatility range is 52 to 55 kPa and the specified initial boiling point range is (23.9 to 40.6) °C.

* * * * *

26. Section 86.884-8 is amended by revising paragraph (c) introductory text to read as follows:

§ 86.884-8 Dynamometer and engine equipment.

* * * * *

(c) An exhaust system with an appropriate type of smokemeter placed 10 to 32 feet from the exhaust manifold(s), turbocharger outlet(s), exhaust aftertreatment device(s), or crossover junction (on Vee engines), whichever is farthest downstream. The smoke exhaust system shall present an exhaust backpressure within +0.2 inch

Hg of the upper limit at maximum rated horsepower, as established by the engine manufacturer in his sales and service literature for vehicle application. The following options may also be used:

* * * * *

27. Section 86.884-10 is amended by revising paragraph (a) introductory text to read as follows:

§ 86.884-10 Information.

* * * * *

(a) *Engine description and specifications.* A copy of the information specified in this paragraph must accompany each engine sent to the Administrator for compliance testing. If

the engine is submitted to the Administrator for testing under subpart N of this part or 40 CFR part 1065, only the specified information need accompany the engine. The manufacturer need not record the information specified in this paragraph for each test if the information, with the exception of paragraphs (a)(3), (a)(12), and (a)(13) of this section, is included in the manufacturer's part I.

* * * * *

28. Section 86.884-12 is amended by revising paragraph (c)(2) to read as follows:

§ 86.884–12 Test run.

* * * * *

(c) * * *

(2) Warm up the engine by the procedure described in 40 CFR 1065.530.

* * * * *

29. Section 86.1005–90 is amended by revising paragraphs (a)(1)(i), (a)(1)(ii), (a)(2)(vi)(A), and (a)(2)(vi)(B) to read as follows:

§ 86.1005–90 Maintenance of records; submittal of information.

(a) * * *

(1) * * *

(i) If testing heavy-duty gasoline-fueled or methanol-fueled Otto-cycle engines, the equipment requirements specified in 40 CFR part 1065, subparts B and C;

(ii) If testing heavy-duty petroleum-fueled or methanol-fueled diesel engines, the equipment requirements specified in 40 CFR part 1065, subparts B and C;

* * * * *

(2) * * *

(vi) * * *

(A) If testing gasoline-fueled or methanol-fueled Otto-cycle heavy-duty engines, the record requirements specified in 40 CFR 1065.695;

(B) If testing petroleum-fueled or methanol-fueled diesel heavy-duty engines, the record requirements specified in 40 CFR 1065.695;

* * * * *

30. Section 86.1108–87 is amended by revising paragraphs (a)(1)(i), (a)(1)(ii), (a)(2)(vi)(A), and (a)(2)(vi)(B) to read as follows:

§ 86.1108–87 Maintenance of records.

(a) * * *

(1) * * *

(i) If testing heavy-duty gasoline engines, the equipment requirements specified in 40 CFR part 1065, subparts B and C;

(ii) If testing heavy-duty diesel engines, the equipment requirements specified in 40 CFR part 1065, subparts B and C;

* * * * *

(2) * * *

(vi) * * *

(A) If testing heavy-duty gasoline engines, the record requirements specified in 40 CFR 1065.695;

(B) If testing heavy-duty diesel engines, the record requirements specified in 40 CFR 1065.695;

* * * * *

30a. A new § 86.1213–08 is added to read as follows:

§ 86.1213–08 Fuel specifications.

The test fuels listed in 40 CFR part 1065, subpart H, shall be used for evaporative emission testing.

31. Section 86.1301–90 is redesignated as § 86.1301 and revised to read as follows:

§ 86.1301 Scope; applicability.

This subpart specifies gaseous emission test procedures for Otto-cycle and diesel heavy-duty engines, and particulate emission test procedures for diesel heavy-duty engines, as follows:

(a) For model years 1990 through 2003, manufacturers must use the test procedures specified in § 86.1305–90.

(b) For model years 2004 and 2005, manufacturers must use the test procedures specified in § 86.1305–2004.

(c) For model years 2006 and 2007, manufacturers may use the test procedures specified in § 86.1305–2004 or § 86.1305–2008.

(d) For model years 2008 and later, manufacturers must use the test procedures specified in § 86.1305–2008.

(e) As allowed under subpart A of this part, manufacturers may use carryover data from previous model years to demonstrate compliance with emission standards, without regard to the provisions of this section.

32. Section 86.1304–90 is redesignated as § 86.1304 and amended by revising paragraph (a) to read as follows:

§ 86.1304 Section numbering; construction.

(a) *Section numbering.* The model year of initial applicability is indicated by the section number. The digits following the hyphen designate the first model year for which a section is applicable. The section continues to apply to subsequent model years unless a later model year section is adopted. (*Example:* § 86.13xx–2004 applies to the 2004 and subsequent model years. If a § 86.13xx–2007 is promulgated it would apply beginning with the 2007 model year; § 86.13xx–2004 would apply to model years 2004 through 2006.)

14. A new § 86.1305–2008 is added to read as follows:

§ 86.1305–2008 Introduction; structure of subpart.

(a) This subpart specifies the equipment and procedures for performing exhaust-emission tests on Otto-cycle and diesel-cycle heavy-duty engines. Subpart A of this part sets forth the emission standards and general testing requirements to comply with EPA certification procedures.

(b) Use the applicable equipment and procedures for spark-ignition or

compression-ignition engines in 40 CFR part 1065 to determine whether engines meet the duty-cycle emission standards in subpart A of this part. Measure the emissions of all regulated pollutants as specified in 40 CFR part 1065. Note that we generally do not allow partial-flow sampling for measuring PM emissions on a laboratory dynamometer for transient testing. Use the duty cycles and procedures specified in § 86.1358–2007, § 86.1360–2007, and § 86.1362–2007. Adjust emission results from engines using aftertreatment technology with infrequent regeneration events as described in § 86.004–28.

(c) The provisions in § 86.1370–2007 and § 86.1372–2007 apply for determining whether an engine meets the applicable not-to-exceed emission standards.

(d) Measure smoke using the procedures in subpart I of this part for evaluating whether engines meet the smoke standards in subpart A of this part.

(e) Use the fuels specified in 40 CFR part 1065 to perform valid tests, as follows:

(1) For service accumulation, use the test fuel or any commercially available fuel that is representative of the fuel that in-use engines will use.

(2) For diesel-fueled engines, use the ultra low-sulfur diesel fuel specified in 40 CFR part 1065 for emission testing.

(f) You may use special or alternate procedures to the extent we allow them under 40 CFR 1065.10.

(g) This subpart is addressed to you as a manufacturer, but it applies equally to anyone who does testing for you.

33. Section 86.1321–90 is amended by revising paragraph (a)(3)(ii) to read as follows:

§ 86.1321–90 Hydrocarbon analyzer calibration.

* * * * *

(a) * * *

(3) * * *

(ii) The HFID optimization procedures outlined in § 86.331–79(c).

* * * * *

34. Section 86.1321–94 is amended by revising paragraph (a)(3)(ii) to read as follows:

§ 86.1321–94 Hydrocarbon analyzer calibration.

* * * * *

(a) * * *

(3) * * *

(ii) The procedure listed in § 86.331–79(c).

* * * * *

35. Section 86.1360–2007 is amended by revising paragraph (b), removing and reserving paragraphs (c) and (e), and

removing paragraphs (h), and (i) to read as follows:

§ 86.1360–2007 Supplemental emission test; test cycle and procedures.

* * * * *

(b) *Test cycle.* (1) Perform testing as described in § 86.1362–2007 for determining whether an engine meets the applicable standards when measured over the supplemental emission test.

(2) For engines not certified to a NO_x standard or FEL less than 1.5 g/bhp-hr, EPA may select, and require the manufacturer to conduct the test using, up to three discrete test points within

the control area defined in paragraph (d) of this section. EPA will notify the manufacturer of these supplemental test points in writing in a timely manner before the test. Emission sampling for these discrete test modes must include all regulated pollutants except particulate matter.

* * * * *

35a. A new § 86.1362–2007 is added to read as follows:

§ 86.1362–2007 How do I measure emissions using ramped-modal procedures?

This section describes how to test engines under steady-state conditions.

(a) Perform steady-state testing with ramped-modal cycles. Start sampling at the beginning of the first mode and continue sampling until the end of the last mode. Calculate emissions as described in 40 CFR 1065.650 and cycle statistics as described in 40 CFR 1065.514.

(b) Measure emissions by testing the engine on a dynamometer with the following duty cycle to determine whether it meets the applicable steady-state emission standards:

RMC mode	Time in mode (seconds)	Engine speed ^{1, 2}	Torque (percent) ^{2, 3}
1a Steady-state	170	Warm Idle	0
1b Transition	20	Linear Transition	Linear Transition
2a Steady-state	170	A	100
2b Transition	20	A	Linear Transition.
3a Steady-state	102	A	25
3b Transition	20	A	Linear Transition.
4a Steady-state	100	A	75
4b Transition	20	A	Linear Transition.
5a Steady-state	103	A	50
5b Transition	20	Linear Transition	Linear Transition.
6a Steady-state	194	B	100
6b Transition	20	B	Linear Transition.
7a Steady-state	219	B	25
7b Transition	20	B	Linear Transition.
8a Steady-state	220	B	75
8b Transition	20	B	Linear Transition.
9a Steady-state	219	B	50
9b Transition	20	Linear Transition	Linear Transition.
10a Steady-state	171	C	100
10b Transition	20	C	Linear Transition.
11a Steady-state	102	C	25
11b Transition	20	C	Linear Transition.
12a Steady-state	100	C	75
12b Transition	20	C	Linear Transition.
13a Steady-state	102	C	50
13b Transition	20	Linear Transition	Linear Transition.
14 Steady-state	168	Warm Idle	0

¹ Speed terms are defined in 40 CFR part 1065.

² Advance from one mode to the next within a 20-second transition phase. During the transition phase, command a linear progression from the speed or torque setting of the current mode to the speed or torque setting of the next mode.

³ The percent torque is relative to maximum torque at the commanded engine speed.

(c) During idle mode, operate the engine with the following parameters:

- (1) Hold the speed within your specifications.
- (2) Set the engine to operate at its minimum fueling rate.
- (3) Keep engine torque under 5 percent of maximum test torque.
- (d) For full-load operating modes, operate the engine at its maximum fueling rate.

(e) See 40 CFR part 1065 for detailed specifications of tolerances and calculations.

(f) Perform the ramped-modal test with a warmed-up engine. If the ramped-modal test follows directly after testing over the Federal Test Procedure,

consider the engine warm. Otherwise, operate the engine to warm it up as described in 40 CFR part 1065, subpart F.

36. Section 86.1509–84 is amended by revising paragraphs (c) and (d) to read as follows:

§ 86.1509–84 Exhaust gas sampling system.

* * * * *

(c) A CVS sampling system with bag or continuous analysis as specified in 40 CFR part 1065 is permitted as applicable. The inclusion of an additional raw carbon dioxide (CO₂) analyzer as specified in 40 CFR part 1065 is required if the CVS system is

used, in order to accurately determine the CVS dilution factor. The heated sample line specified in 40 CFR part 1065 for raw emission requirements is not required for the raw CO₂ measurement.

(d) A raw exhaust sampling system as specified in 40 CFR part 1065 is permitted.

37. Section 86.1511–84 is amended by revising paragraphs (a)(1) and (b) to read as follows:

§ 86.1511–84 Exhaust gas analysis system.

(a) * * *

(1) The analyzer used shall conform to the accuracy provisions of 40 CFR part 1065, subparts C, D, and F.

(b) The inclusion of a raw CO₂ analyzer as specified in 40 CFR part 1065 is required in order to accurately determine the CVS dilution factor.

38. Section 86.1513–90 is revised to read as follows:

§ 86.1513–90 Fuel specifications.

The requirements of this section are set forth in § 86.1313–94 for heavy-duty engines, and in § 86.113–90(a) for light-duty trucks.

39. Section 86.1513–94 is revised to read as follows:

§ 86.1513–94 Fuel specifications.

The requirements of this section are set forth in 40 CFR part 1065, subpart H, for heavy-duty engines and in § 86.113–94 for light-duty trucks.

40. Section 86.1514–84 is amended by revising paragraphs (b) and (c) to read as follows:

§ 86.1514–84 Analytical gases.

(b) If the raw CO sampling system specified in 40 CFR part 1065 is used, the analytical gases specified in 40 CFR part 1065, subpart H, shall be used.

(c) If a CVS sampling system is used, the analytical gases specified in 40 CFR part 1065, subpart H, shall be used.

41. Section 86.1519–84 is revised to read as follows:

§ 86.1519–84 CVS calibration.

If the CVS system is used for sampling during the idle emission test, the calibration instructions are specified in 40 CFR part 1065, subpart D, for heavy-duty engines, and § 86.119–78 for light-duty trucks.

42. Section 86.1524–84 is revised to read as follows:

§ 86.1524–84 Carbon dioxide analyzer calibration.

(a) The calibration requirements for the dilute-sample CO₂ analyzer are specified in 40 CFR part 1065, subpart D, for heavy-duty engines and § 86.124–78 for light-duty trucks.

(b) The calibration requirements for the raw CO₂ analyzer are specified in 40 CFR part 1065, subpart D.

43. Section 86.1530–84 is amended by revising paragraph (b) to read as follows:

§ 86.1530–84 Test sequence; general requirements.

(b) Ambient test cell conditions during the test shall be those specified in § 86.130–78 or 40 CFR part 1065, subpart F.

44. Section 86.1537–84 is amended by revising paragraphs (c), (e)(6), and (f) to read as follows:

§ 86.1537–84 Idle test run.

(c) Achieve normal engine operating condition. The transient engine or chassis dynamometer test is an acceptable technique for warm-up to normal operating condition for the idle test. If the emission test is not performed prior to the idle emission test, a heavy-duty engine may be warmed-up according to 40 CFR part 1065, subpart F. A light-duty truck may be warmed up by operation through one Urban Dynamometer Driving Schedule test procedure (see § 86.115–78 and appendix I to this part).

(6) For bag sampling, sample idle emissions long enough to obtain a sufficient bag sample, but in no case shorter than 60 seconds nor longer than 6 minutes. Follow the sampling and exhaust measurements requirements of 40 CFR part 1065, subpart F, for conducting the raw CO₂ measurement.

(f) If the raw exhaust sampling and analysis technique specified in 40 CFR part 1065 is used, the following procedures apply:

(1) Warm up the engine or vehicle per paragraphs (c) and (d) of this section. Operate the engine or vehicle at the conditions specified in paragraph (e)(4) of this section.

(2) Follow the sampling and exhaust measurement requirements of 40 CFR part 1065, subpart F. The idle sample shall be taken for 60 seconds minimum, and no more than 64 seconds. The chart reading procedures of 40 CFR part 1065, subpart F, shall be used to determine the analyzer response.

45. Section 86.1540–84 is amended by revising paragraphs (b) and (c) to read as follows:

§ 86.1540–84 Idle exhaust sample analysis.

(b) If the CVS sampling system is used, the analysis procedures for dilute CO and CO₂ specified in 40 CFR part 1065 apply. Follow the raw CO₂ analysis procedure specified in 40 CFR part 1065, subpart F, for the raw CO₂ analyzer.

(c) If the continuous raw exhaust sampling technique specified in 40 CFR part 1065 is used, the analysis procedures for CO specified in 40 CFR part 1065, subpart F, apply.

46. Section 86.1542–84 is amended by revising paragraph (a) introductory text to read as follows:

§ 86.1542–84 Information required.

(a) General data—heavy-duty engines. Information shall be recorded for each idle emission test as specified in 40 CFR part 1065, subpart G. The following test data are required:

47. Section 86.1544–84 is amended by revising paragraphs (b)(1), (b)(2), and (c) to read as follows:

§ 86.1544–84 Calculation; idle exhaust emissions.

(1) Use the procedures, as applicable, in 40 CFR 1065.650 to determine the dilute wet-basis CO and CO₂ in percent.

(2) Use the procedure, as applicable, in 40 CFR 1065.650 to determine the raw dry-basis CO₂ in percent.

(c) If the raw exhaust sampling and analysis system specified in 40 CFR part 1065 is used, the percent for carbon monoxide on a dry basis shall be calculated using the procedure, as applicable, in 40 CFR 1065.650.

48. Section 86.1708–99 is amended by revising Tables R99–5 and R99–6 to read as follows:

§ 86.1708–99 Exhaust emission standards for 1999 and later light-duty vehicles.

(c) * * *
(2) * * *

TABLE R99–5.—INTERMEDIATE USEFUL LIFE (50,000 MILE) IN-USE STANDARDS (G/M) FOR LIGHT-DUTY VEHICLES

Vehicle emission category	Model year	NMOG	CO	NO _x	HCHO
LEV	1999	0.100	3.4	0.3	0.015
ULEV	1999–2002	0.055	2.1	0.3	0.008

TABLE R99-6.—FULL USEFUL LIFE (100,000 MILE) IN-USE STANDARDS (G/MI) FOR LIGHT-DUTY VEHICLES

Vehicle emission category	Model year	NMOG	CO	NO _x	HCHO
LEV	1999	0.125	4.2	0.4	0.018
ULEV	1999-2002	0.075	3.4	0.4	0.011

* * * * *
 49. Section 86.1709-99 is amended by revising paragraph (c)(1) introductory text and by revising Table R99-14.2, to read as follows:

§ 86.1709-99 Exhaust emission standards for 1999 and later light light-duty trucks.
 * * * * *
 (c) * * *
 (1) 1999 model year light light-duty trucks certified as LEVs and 1999 through 2002 model year light light-duty trucks certified as ULEVs shall

meet the applicable intermediate and full useful life in-use standards in paragraph (c)(2) of this section, according to the following provisions:
 * * * * *
 (e) * * *
 (2) * * *

TABLE R99-14.2.—SFTP EXHAUST EMISSION STANDARDS (G/MI) FOR LEVs AND ULEVs

Loaded vehicle weight (lbs)	US06 Test		A/C Test	
	NMHC + NO _x	CO	NMHC + NO _x	CO
0-3750	0.14	8.0	0.20	2.7
3751-5750	0.25	10.5	0.27	3.5

* * * * *
 50. Section 86.1710-99 is amended by revising paragraph (c)(8) introductory text to read as follows:

§ 86.1710-99 Fleet average non-methane organic gas exhaust emission standards for light-duty vehicles and light light-duty trucks.

* * * * *
 (c) * * *
 (8) Manufacturers may earn and bank credits in the NTR for model years 1997 and 1998. In states without a Section 177 Program effective in model year 1997 or 1998, such credits will be calculated as set forth in paragraphs (a) and (b) of this section, except that the applicable fleet average NMOG standard shall be 0.25 g/mi NMOG for the averaging set for light light-duty trucks from 0-3750 lbs LVW and light-duty vehicles or 0.32 g/mi NMOG for the averaging set for light light-duty trucks from 3751-5750 lbs LVW. In states that opt into National LEV and have a Section 177 Program effective in model

year 1997 or 1998, such credits will equal the unused credits earned in those states.
 * * * * *

51. Section 86.1711-99 is amended by revising the section heading and paragraph (a) to read as follows:

§ 86.1711-99 Limitations on sale of Tier 1 vehicles and TLEVs.

(a) In the 2001 and subsequent model years, manufacturers may sell Tier 1 vehicles and TLEVs in the NTR only if vehicles with the same engine families are certified and offered for sale in California in the same model year, except as provided under § 86.1707(d)(4).
 * * * * *

52. Section 86.1808-01 is amended by revising paragraph (f)(19)(iii) to read as follows:

§ 86.1808-01 Maintenance instructions.

* * * * *
 (f) * *

(19) * * *
 (iii) Any person who violates a provision of this paragraph (f) shall be subject to a civil penalty of not more than \$32,500 per day for each violation. This maximum penalty is shown for calendar year 2004. Maximum penalty limits for later years may be set higher based on the Consumer Price Index, as specified in 40 CFR part 19. In addition, such person shall be liable for all other remedies set forth in Title II of the Clean Air Act, remedies pertaining to provisions of Title II of the Clean Air Act, or other applicable provisions of law.

53. Section 86.1811-04 is amended by revising Table SO4-2 in paragraph (c)(6) to read as follows:

§ 86.1811-04 Emission standards for light-duty vehicles, light-duty trucks and medium-duty passenger vehicles.

* * * * *
 (c) * * *
 (6) * * *

TABLE SO4-2.—TIER 2 AND INTERIM NON-TIER 2 INTERMEDIATE USEFUL LIFE (50,000 MILE) EXHAUST MASS EMISSION STANDARDS (GRAMS PER MILE)

Bin No.	NO _x	NMOG	CO	HCHO	PM	Notes
11	0.6	0.195	5.0	0.022	.....	a c f h
10	0.4	0.125/0.160	3.4/4.4	0.015/0.018	.....	a b d f g h
9	0.2	0.075/0.140	3.4	0.015	.....	a b e f g h
8	0.14	0.100/0.125	3.4	0.015	.....	b f h i
7	0.11	0.075	3.4	0.015	.....	f h
6	0.08	0.075	3.4	0.015	.....	f h
5	0.05	0.075	3.4	0.015	.....	f h

NOTES:
^a This bin deleted at end of 2006 model year (end of 2008 model year for HLDTs and MDPVs).
^b Higher NMOG, CO and HCHO values apply for HLDTs and MDPVs only.
^c This bin is only for MDPVs.

^d Optional NMOG standard of 0.195 g/mi applies for qualifying LDT4s and qualifying MDPVs only.
^e Optional NMOG standard of 0.100 g/mi applies for qualifying LDT2s only.
^f The full useful life PM standards from Table S04-1 also apply at intermediate useful life.
^g Intermediate life standards of this bin are optional for diesels.
^h Intermediate life standards are optional for vehicles certified to a useful life of 150,000 miles.
ⁱ Higher NMOG standard deleted at end of 2008 model year.

* * * * *
 22. In Appendix I to Part 86 paragraph (a) is amended by revising the table entries for "961" and "1345", paragraph (b) is amended by revising the table entries for "363," "405," "453," "491," "577," "662," "663," "664," and "932", and paragraph (h) is amended by adding table entries for "595," "596," "597," "598," "599," and "600" in numerical order to read as follows:

Appendix I to Part 86—Urban Dynamometer Schedules

(a) EPA Urban Dynamometer Driving Schedule for Light-Duty Vehicles and Light-Duty Trucks.

EPA URBAN DYNAMOMETER DRIVING SCHEDULE
 [Speed versus time sequence]

Time (sec.)	Speed (m.p.h.)
* * * * *	*
961	5.3
* * * * *	*
1345	18.3
* * * * *	*

(b) EPA Urban Dynamometer Driving Schedule for Light-Duty Vehicles, Light-Duty Trucks, and Motorcycles with engine displacements equal to or greater than 170 cc (10.4 cu. in.).

SPEED VERSUS TIME SEQUENCE

Time (seconds)	Speed (kilometers per hour)
* * * * *	*
363	52.8
* * * * *	*
405	14.8
* * * * *	*
453	31.9
* * * * *	*
491	55.5
* * * * *	*
577	27.4
* * * * *	*
662	42.0
663	42.2
664	42.2

SPEED VERSUS TIME SEQUENCE—Continued

Time (seconds)	Speed (kilometers per hour)
* * * * *	*
932	40.2
* * * * *	*

(h) EPA SC03 Driving Schedule for Light-Duty Vehicles and Light-Duty Trucks.

EPA SC03 DRIVING SCHEDULE
 [Speed versus time sequence]

Time (sec)	Speed (mph)
* * * * *	*
595	0.0
596	0.0
597	0.0
598	0.0
599	0.0
600	0.0

PART 89—CONTROL OF EMISSIONS FROM NEW AND IN-USE NONROAD COMPRESSION-IGNITION ENGINES

54. The authority citation for part 89 is revised to read as follows:

Authority: 42 U.S.C. 7401-7671q.

55. Section 89.1 is amended by revising paragraph (b)(4)(ii) to read as follows:

§ 89.1 Applicability.

(b) * * *
 (4) * * *
 (ii) Are exempted from the requirements of 40 CFR part 94 by exemption provisions of 40 CFR part 94 other than those specified in 40 CFR 94.907 or 94.912.

56. Section 89.2 is amended by removing the definitions for "Marine diesel engine" and "Vessel", revising the definition of "United States", and adding definitions for "Amphibious vehicle", "Marine engine", and "Marine vessel" to read as follows:

§ 89.2 Definitions.

* * * * *
Amphibious vehicle means a vehicle with wheels or tracks that is designed

primarily for operation on land and secondarily for operation in water.

* * * * *
Marine engine means a nonroad engine that is installed or intended to be installed on a marine vessel. This includes a portable auxiliary marine engine only if its fueling, cooling, or exhaust system is an integral part of the vessel. There are two kinds of marine engines:

(1) Propulsion marine engine means a marine engine that moves a vessel through the water or directs the vessel's movement.

(2) Auxiliary marine engine means a marine engine not used for propulsion.

Marine vessel has the meaning given in 1 U.S.C. 3, except that it does not include amphibious vehicles. The definition in 1 U.S.C. 3 very broadly includes every craft capable of being used as a means of transportation on water.

* * * * *
United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

* * * * *
 57. Section 89.102 is amended by revising paragraph (d)(1)(i) to read as follows:

§ 89.102 Effective dates, optional inclusion, flexibility for equipment manufacturers.

* * * * *

(d) * * *
 (1) * * *

(i) Equipment rated at or above 37 kW. For nonroad equipment and vehicles with engines rated at or above 37 kW, a manufacturer may take any of the actions identified in § 89.1003(a)(1) for a portion of its U.S.-directed production volume of such equipment and vehicles during the seven years immediately following the date on which Tier 2 engine standards first apply to engines used in such equipment and vehicles, provided that the seven-year sum of these portions in each year, as expressed as a percentage for each year, does not exceed 80, and provided that all such equipment and vehicles or equipment contain Tier 1 or Tier 2 engines;

* * * * *

58. Section 89.110 is amended by revising paragraph (b)(2) to read as follows:

§ 89.110 Emission control information label.

* * * * *

(b) * * *

(2) The full corporate name and trademark of the manufacturer; though the label may identify another company and use its trademark instead of the manufacturer's if the provisions of § 89.1009 are met.

* * * * *

59. Section 89.112 is amended by revising paragraph (f)(3) to read as follows:

§ 89.112 Oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter exhaust emission standards.

* * * * *

(f) * * *

(3) *Test procedures.* NO_x, NMHC, and PM emissions are measured using the procedures set forth in 40 CFR part 1065, in lieu of the procedures set forth in subpart E of this part. CO emissions may be measured using the procedures set forth either in 40 CFR part 1065 or in Subpart E of this part. Manufacturers may use an alternate procedure to demonstrate the desired level of emission control if approved in advance by the Administrator. Engines meeting the requirements to qualify as Blue Sky Series engines must be capable of maintaining a comparable level of emission control when tested using the procedures set forth in paragraph (c) of this section and subpart E of this part. The numerical emission levels measured using the procedures from subpart E of this part may be up to 20 percent higher than those measured using the procedures from 40 CFR part 1065 and still be considered comparable.

60. Section 89.130 is revised to read as follows:

§ 89.130 Rebuild practices.

The provisions of 40 CFR 1068.120 apply to rebuilding of engines subject to the requirements of this part 89.

61. Section 89.301 is amended by revising paragraph (d) to read as follows:

§ 89.301 Scope; applicability.

* * * * *

(d) Additional information about system design, calibration methodologies, and so forth, for raw gas sampling can be found in 40 CFR part 1065. Examples for system design, calibration methodologies, and so forth, for dilute exhaust gas sampling can be found in 40 CFR part 1065.

62. Section 89.319 is amended by revising paragraphs (b)(2)(i) and (c) introductory text to read as follows:

§ 89.319 Hydrocarbon analyzer calibration.

(b) * * *

(2) * * *

(i) The HFID optimization procedures outlined in 40 CFR part 1065, subpart D.

(c) Initial and periodic calibration.

Prior to introduction into service, after any maintenance which could alter calibration, and monthly thereafter, the FID or HFID hydrocarbon analyzer shall be calibrated on all normally used instrument ranges using the steps in this paragraph (c). Use the same flow rate and pressures as when analyzing samples. Calibration gases shall be introduced directly at the analyzer, unless the "overflow" calibration option of 40 CFR part 1065, subpart F, for the HFID is taken. New calibration curves need not be generated each month if the existing curve can be verified as continuing to meet the requirements of paragraph (c)(3) of this section.

* * * * *

63. Section 89.320 is amended by revising paragraph (d) to read as follows:

§ 89.320 Carbon monoxide analyzer calibration.

* * * * *

(d) The initial and periodic interference, system check, and calibration test procedures specified in 40 CFR part 1065 may be used in lieu of the procedures specified in this section.

64. Section 89.321 is amended by revising paragraph (d) to read as follows:

§ 89.321 Oxides of nitrogen analyzer calibration.

* * * * *

(d) The initial and periodic interference, system check, and calibration test procedures specified in 40 CFR part 1065 may be used in lieu of the procedures specified in this section.

65. Section 89.322 is amended by revising paragraph (b) to read as follows:

§ 89.322 Carbon dioxide analyzer calibration.

* * * * *

(b) The initial and periodic interference, system check, and calibration test procedures specified in 40 CFR part 1065 may be used in lieu of the procedures in this section.

66. Section 89.410 is amended by adding paragraph (e) to read as follows:

§ 89.410 Engine test cycle.

* * * * *

(e) Manufacturers may optionally use the ramped-modal duty cycles corresponding to the discrete-mode duty cycles specified in this section, as described in 40 CFR 1039.505.

67. Section 89.419 is amended by revising paragraphs (a) introductory text, (a)(3)(i), (b)(1) introductory text, (b)(2)(i), (b)(2)(v)(B), (b)(4)(ii), and (b)(4)(iii) to read as follows:

§ 89.419 Dilute gaseous exhaust sampling and analytical system description.

(a) *General.* The exhaust gas sampling system described in this section is designed to measure the true mass of gaseous emissions in the exhaust of petroleum-fueled nonroad compression-ignition engines. This system utilizes the CVS concept (described in 40 CFR part 1065, subparts A and B) of measuring mass emissions of HC, CO, and CO₂. A continuously integrated system is required for HC and NO_x measurement and is allowed for all CO and CO₂ measurements. The mass of gaseous emissions is determined from the sample concentration and total flow over the test period. As an option, the measurement of total fuel mass consumed over a cycle may be substituted for the exhaust measurement of CO₂. General requirements are as follows:

* * * * *

(3) * * *

(i) Bag sampling (see 40 CFR part 1065) and analytical capabilities (see 40 CFR part 1065), as shown in Figure 2 and Figure 3 in appendix A to this subpart; or

* * * * *

(b) * * *

(1) *Exhaust dilution system.* The PDP-CVS shall conform to all of the requirements listed for the exhaust gas PDP-CVS in 40 CFR part 1065. The CFV-CVS shall conform to all of the requirements listed for the exhaust gas CFV-CVS in 40 CFR part 1065. In addition, the CVS must conform to the following requirements:

* * * * *

(2) * * *

(i) The continuous HC sample system (as shown in Figure 2 or 3 in appendix A to this subpart) uses an "overflow" zero and span system. In this type of system, excess zero or span gas spills out of the probe when zero and span checks of the analyzer are made. The "overflow" system may also be used to calibrate the HC analyzer according to 40 CFR part 1065, subpart F, although this is not required.

* * * * *

(v) * * *
 (B) Have a wall temperature of 191 °C ±11 °C over its entire length. The temperature of the system shall be demonstrated by profiling the thermal characteristics of the system where possible at initial installation and after any major maintenance performed on the system. The profiling shall be accomplished using the insertion thermocouple probing technique. The system temperature will be monitored continuously during testing at the locations and temperature described in 40 CFR 1065.145.

(4) * * *
 (ii) The continuous NO_x, CO, or CO₂ sampling and analysis system shall conform to the specifications of 40 CFR 1065.145 with the following exceptions and revisions:

(A) The system components required to be heated by 40 CFR 1065.145 need only be heated to prevent water condensation, the minimum component temperature shall be 55 °C.

(B) The system response shall meet the specifications in 40 CFR part 1065, subpart C.

(C) Alternative NO_x measurement techniques outlined in 40 CFR part 1065, subpart D, are not permitted for NO_x measurement in this subpart.

(D) All analytical gases must conform to the specifications of § 89.312.

(E) Any range on a linear analyzer below 155 ppm must have and use a calibration curve conforming to § 89.310.

(iii) The chart deflections or voltage output of analyzers with non-linear calibration curves shall be converted to concentration values by the calibration curve(s) specified in § 89.313 before flow correction (if used) and subsequent integration takes place.

68. Section 89.421 is amended by revising paragraphs (b) and (c) to read as follows:

§ 89.421 Exhaust gas analytical system; CVS bag sample.

(b) *Major component description.* The analytical system, Figure 4 in appendix A to this subpart, consists of a flame ionization detector (FID) (heated for petroleum-fueled compression-ignition engines to 191 °C ±6 °C) for the measurement of hydrocarbons, nondispersive infrared analyzers (NDIR) for the measurement of carbon monoxide and carbon dioxide, and a chemiluminescence detector (CLD) (or HCLD) for the measurement of oxides of nitrogen. The exhaust gas analytical system shall conform to the following requirements:

(1) The CLD (or HCLD) requires that the nitrogen dioxide present in the sample be converted to nitric oxide before analysis. Other types of analyzers may be used if shown to yield equivalent results and if approved in advance by the Administrator.

(2) If CO instruments are used which are essentially free of CO₂ and water vapor interference, the use of the conditioning column may be deleted. (See 40 CFR part 1065, subpart D.)

(3) A CO instrument will be considered to be essentially free of CO₂ and water vapor interference if its response to a mixture of 3 percent CO₂ in N₂, which has been bubbled through water at room temperature, produces an equivalent CO response, as measured on the most sensitive CO range, which is less than 1 percent of full scale CO concentration on ranges above 300 ppm full scale or less than 3 ppm on ranges below 300 ppm full scale. (See 40 CFR part 1065, subpart D.)

(c) *Alternate analytical systems.* Alternate analysis systems meeting the specifications of 40 CFR part 1065, subpart A, may be used for the testing required under this subpart. Heated analyzers may be used in their heated configuration.

69. Section 89.424 is amended by revising the note at the end of paragraph (d)(3) to read as follows:

§ 89.424 Dilute emission sampling calculations.

(d) * * *

(3) * * *

(Note: If a CO instrument that meets the criteria specified in 40 CFR part 1065, subpart C, is used without a sample dryer according to 40 CFR 1065.145, CO_{em} must be substituted directly for CO_e and CO_{dm} must be substituted directly for CO_d.)

70. Appendix A to Subpart F is amended by revising Table 1 to read as follows:

Appendix A to Subpart F of Part 89—Sampling Plans for Selective Enforcement Auditing of Nonroad Engines

TABLE 1.—SAMPLING PLAN CODE LETTER

Annual engine family sales	Code letter
20–50	AA ¹
20–99	A
100–299	B
300–499	C

TABLE 1.—SAMPLING PLAN CODE LETTER—Continued

Annual engine family sales	Code letter
500 or greater	D

¹ A manufacturer may optionally use either the sampling plan for code letter “AA” or sampling plan for code letter “A” for Selective Enforcement Audits of engine families with annual sales between 20 and 50 engines. Additionally, the manufacturer may switch between these plans during the audit.

71. Section 89.603 is amended by adding paragraph (e) to read as follows:

§ 89.603 General requirements for importation of nonconforming nonroad engines.

(e)(1) The applicable emission standards for engines imported by an ICI under this subpart are the emission standards applicable to the Original Production (OP) year of the engine.

(2) Where engine manufacturers have choices in emission standards for one or more pollutants in a given model year, the standard that applies to the ICI is the least stringent standard for that pollutant applicable to the OP year for the appropriate power category.

(3) ICIs may not generate, use or trade emission credits or otherwise participate in any way in the averaging, banking and trading program.

(4) An ICI may import no more than a total of 5 engines under the certificate(s) it receives under this part for any given model year, except as allowed by paragraph (e)(5) of this section. For ICIs owned by a parent company, the importation limit includes importation by the parent company and all its subsidiaries.

(5) An ICI may exceed the limit outlined in paragraph (e)(4) of this section, provided that any engines in excess of the limit meet the emission standards and other requirements outlined in the applicable provisions of Part 89 or 1039 of this chapter for the model year in which the engine is modified (instead of the emission standards and other requirements applicable for the OP year of the vehicle/engine).

72. Section 89.612 is amended by revising paragraph (d) to read as follows:

§ 89.612 Prohibited acts; penalties.

(d) An importer who violates section 213(d) and section 203 of the Act is subject to the provisions of section 209 of the Act and is also subject to a civil penalty under section 205 of the Act of

not more than \$32,500 for each nonroad engine subject to the violation. In addition to the penalty provided in the Act, where applicable, a person or entity who imports an engine under the exemption provisions of § 89.611(b) and, who fails to deliver the nonroad engine to the U.S. Customs Service is liable for liquidated damages in the amount of the bond required by applicable Customs laws and regulations. The maximum penalty value listed in this paragraph (d) is shown for calendar year 2004. Maximum penalty limits for later years may be adjusted based on the Consumer Price Index. The specific regulatory provisions for changing the maximum penalties, published in 40 CFR part 19, reference the applicable U.S. Code citation on which the prohibited action is based.

* * * * *

73. A new § 89.913 is added to subpart J to read as follows:

§ 89.913 What provisions apply to engines certified under the motor-vehicle program?

You may use the provisions of 40 CFR 1039.605 to introduce new nonroad engines into commerce if they are already certified to the requirements that apply to compression-ignition engines under 40 CFR parts 85 and 86. For the purposes of this section, all references in 40 CFR 1039.605 to 40 CFR part 1039 or sections in that part are replaced by references to this part 89 or the corresponding sections in this part 89.

74. A new § 89.914 is added to subpart J to read as follows:

§ 89.914 What provisions apply to vehicles certified under the motor-vehicle program?

You may use the provisions of 40 CFR 1039.610 to introduce new nonroad engines or equipment into commerce if the vehicle is already certified to the requirements that apply under 40 CFR parts 85 and 86. For the purposes of this section, all references in 40 CFR 1039.610 to 40 CFR part 1039 or sections in that part are replaced by references to this part 89 or the corresponding sections in this part 89.

75. Section 89.1003 is amended by removing and reserving paragraphs (b)(5) and (b)(6), redesignating (b)(7)(iv) as (b)(7)(vii), revising paragraphs (a)(3)(iii), (b)(7)(ii), and (b)(7)(iii), and adding paragraphs (b)(7)(iv) and (b)(7)(viii) to read as follows:

§ 89.1003 Prohibited acts.

- (a) * * *
- (3) * * *

(iii) For a person to deviate from the provisions of § 89.130 when rebuilding

an engine (or rebuilding a portion of an engine or engine system). Such a deviation violates paragraph (a)(3)(i) of this section.

* * * * *

- (b) * * *
- (7) * * *

(ii) The engine manufacturer or its agent takes ownership and possession of the engine being replaced or confirms that the engine has been destroyed; and

(iii) If the engine being replaced was not certified to any emission standards under this part, the replacement engine must have a permanent label with your corporate name and trademark and the following language, or similar alternate language approved by the Administrator:

THIS ENGINE DOES NOT COMPLY WITH U.S. EPA NONROAD OR HIGHWAY EMISSION REQUIREMENTS. SELLING OR INSTALLING THIS ENGINE FOR ANY PURPOSE OTHER THAN TO REPLACE A NONROAD ENGINE BUILT BEFORE JANUARY 1, [Insert appropriate year reflecting when the earliest tier of standards began to apply to engines of that size and type] MAY BE A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY.

(iv) If the engine being replaced was certified to emission standards less stringent than those in effect when you produce the replacement engine, the replacement engine must have a permanent label with your corporate name and trademark and the following language, or similar alternate language approved by the Administrator:

THIS ENGINE COMPLIES WITH U.S. EPA NONROAD EMISSION REQUIREMENTS UNDER THE PROVISIONS OF 40 CFR 89.1003(b)(7). SELLING OR INSTALLING THIS ENGINE FOR ANY PURPOSE OTHER THAN TO REPLACE A NONROAD ENGINE BUILT BEFORE JANUARY 1, [Insert appropriate year reflecting when the next tier of emission standards began to apply] MAY BE A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY.

* * * * *

(viii) The provisions of this section may not be used to circumvent emission standards that apply to new engines under this part.

76. Section 89.1006 is amended by revising paragraphs (a)(1), (a)(2), (a)(5), and (c)(1) and adding paragraph (a)(6) to read as follows:

§ 89.1006 Penalties.

- (a) * * *

(1) A person who violates § 89.1003(a)(1), (a)(4), or (a)(6), or a

manufacturer or dealer who violates § 89.1003(a)(3)(i), is subject to a civil penalty of not more than \$32,500 for each violation.

(2) A person other than a manufacturer or dealer who violates § 89.1003(a)(3)(i) or any person who violates § 89.1003(a)(3)(ii) is subject to a civil penalty of not more than \$2,750 for each violation.

* * * * *

(5) A person who violates § 89.1003(a)(2) or (a)(5) is subject to a civil penalty of not more than \$32,500 per day of violation.

(6) The maximum penalty values listed in this section are shown for calendar year 2004. Maximum penalty limits for later years may be adjusted based on the Consumer Price Index. The specific regulatory provisions for changing the maximum penalties, published in 40 CFR part 19, reference the applicable U.S. Code citation on which the prohibited action is based.

* * * * *

- (c) * * *

(1) Administrative penalty authority. In lieu of commencing a civil action under paragraph (b) of this section, the Administrator may assess any civil penalty prescribed in paragraph (a) of this section, except that the maximum amount of penalty sought against each violator in a penalty assessment proceeding shall not exceed \$270,000, unless the Administrator and the Attorney General jointly determine that a matter involving a larger penalty amount is appropriate for administrative penalty assessment. Any such determination by the Administrator and the Attorney General is not subject to judicial review. Assessment of a civil penalty shall be by an order made on the record after opportunity for a hearing held in accordance with the procedures found at part 22 of this chapter. The Administrator may compromise, or remit, with or without conditions, any administrative penalty which may be imposed under this section.

* * * * *

77. A new § 89.1009 is added to subpart K to read as follows:

§ 89.1009 What special provisions apply to branded engines?

The following provisions apply if you identify the name and trademark of another company instead of your own on your emission control information label, as provided by § 89.110(b)(2):

(a) You must have a contractual agreement with the other company that obligates that company to take the following steps:

(1) Meet the emission warranty requirements that apply under this part. This may involve a separate agreement involving reimbursement of warranty-related expenses.

(2) Report all warranty-related information to the certificate holder.

(b) In your application for certification, identify the company whose trademark you will use and describe the arrangements you have made to meet your requirements under this section.

(c) You remain responsible for meeting all the requirements of this chapter, including warranty and defect-reporting provisions.

PART 90—CONTROL OF EMISSIONS FROM NONROAD SPARK-IGNITION ENGINES AT OR BELOW 19 KILOWATTS

78. The authority citation for part 90 is revised to read as follows:

Authority: 42 U.S.C. 7401–7671q.

79. Section 90.1 is amended by removing and reserving paragraph (d)(4), revising paragraphs (b) and (d)(5), and adding paragraph (c) to read as follows:

§ 90.1 Applicability.

* * * * *

(b) In certain cases, the regulations in this part 90 also apply to new engines with a gross power output above 19 kW that would otherwise be covered by 40 CFR part 1048 or 1051. See 40 CFR 1048.615 or 1051.145(a)(3) for provisions related to this allowance.

(c) In certain cases, the regulations in this part 90 apply to new engines below 50 cc used in motorcycles that are motor vehicles. See 40 CFR 86.447–2006 or 86.448–2006 for provisions related to this allowance.

* * * * *

(d) * * *

(5) Engines certified to meet the requirements of 40 CFR part 1048, subject to the provisions of § 90.913.

* * * * *

80. Section 90.3 is amended by revising the definitions for “Marine engine”, “Marine vessel”, and “United States” and adding definitions for “Amphibious vehicle” and “Maximum engine power” in alphabetical order to read as follows:

§ 90.3 Definitions.

* * * * *

Amphibious vehicle means a vehicle with wheels or tracks that is designed primarily for operation on land and secondarily for operation in water.

* * * * *

Marine engine means a nonroad engine that is installed or intended to be installed on a marine vessel. This includes a portable auxiliary marine engine only if its fueling, cooling, or exhaust system is an integral part of the vessel. There are two kinds of marine engines:

(1) Propulsion marine engine means a marine engine that moves a vessel through the water or directs the vessel’s movement.

(2) Auxiliary marine engine means a marine engine not used for propulsion.

Marine vessel has the meaning given in 1 U.S.C. 3, except that it does not include amphibious vehicles. The definition in 1 U.S.C. 3 very broadly includes every craft capable of being used as a means of transportation on water.

Maximum engine power means gross power.

* * * * *

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

* * * * *

81. Section 90.301 is amended by revising paragraphs (c) and (d) to read as follows:

§ 90.301 Applicability.

* * * * *

(c) Additional information about system design, calibration methodologies, and so forth, for raw gas sampling can be found in 40 CFR part 1065. Examples for system design, calibration methodologies, and so forth, for dilute exhaust gas sampling can be found in 40 CFR part 1065.

(d) For Phase 2 Class I, Phase 2 Class I–B, and Phase 2 Class II natural gas fueled engines, use the procedures of 40 CFR part 1065 to measure nonmethane hydrocarbon (NMHC) exhaust emissions from Phase 2 Class I, Phase 2 Class I–B, and Phase 2 Class II natural gas fueled engines.

82. Section 90.308 is amended by revising paragraph (b)(1) to read as follows:

§ 90.308 Lubricating oil and test fuels.

* * * * *

(b) * * *

(1) The manufacturer must use gasoline having the specifications, or substantially equivalent specifications approved by the Administrator, as specified in Table 3 in Appendix A of this subpart for exhaust emission testing of gasoline fueled engines. As an option, manufacturers may use the fuel

specified in 40 CFR part 1065, subpart H, for gasoline-fueled engines.

* * * * *

83. Section 90.316 is amended by revising paragraphs (b)(2)(ii) and (c) introductory text to read as follows:

§ 90.316 Hydrocarbon analyzer calibration.

* * * * *

(b) * * *

(2) * * *

(ii) The HFID optimization procedures outlined in 40 CFR part 1065, subpart D.

* * * * *

(c) *Initial and periodic calibration.*

Prior to initial use and monthly thereafter, or within one month prior to the certification test, the FID or HFID hydrocarbon analyzer must be calibrated on all normally used instrument ranges using the steps in this paragraph. Use the same flow rate and pressures as when analyzing samples. Introduce calibration gases directly at the analyzer. An optional method for dilute sampling described in 40 CFR part 1065, subpart F, may be used.

* * * * *

84. Section 90.318 is amended by revising paragraph (d) to read as follows:

§ 90.318 Oxides of nitrogen analyzer calibration.

* * * * *

(d) The initial and periodic interference, system check, and calibration test procedures specified in 40 CFR part 1065, subpart D, may be used in lieu of the procedures specified in this section.

85. Section 90.320 is amended by revising paragraph (b) to read as follows:

§ 90.320 Carbon dioxide analyzer calibration.

* * * * *

(b) The initial and periodic interference, system check, and calibration test procedures specified in 40 CFR part 1065, subparts C and D, may be used in lieu of the procedures in this section.

86. Section 90.401 is amended by revising paragraph (d) to read as follows:

§ 90.401 Applicability.

* * * * *

(d) For Phase 2 Class I, Phase 2 Class I–B, and Phase 2 Class II natural gas fueled engines, use the equipment specified in 40 CFR part 1065, subparts D and E, to measure nonmethane hydrocarbon (NMHC) exhaust emissions from Phase 2 Class I, Phase 2 Class I–B, and Phase 2 Class II natural gas fueled engines.

87. Section 90.421 is amended by revising paragraph (b) introductory text,

(b)(4)(ii), and (b)(4)(iii) to read as follows:

§ 90.421 Dilute gaseous exhaust sampling and analytical system description.

* * * * *

(b) *Component description.* The components necessary for exhaust sampling must meet the following requirements:

* * * * *

(4) * * *

(ii) Conform to the continuous NO_x, CO, or CO₂ sampling and analysis system to the specifications of 40 CFR 1065.145, with the following exceptions and revisions:

(A) Heat the system components requiring heating only to prevent water condensation, the minimum component temperature is 55 °C.

(B) Coordinate analysis system response time with CVS flow fluctuations and sampling time/test cycle offsets to meet the time-alignment and dispersion specifications in 40 CFR part 1065, subpart C.

(C) Use only analytical gases conforming to the specifications of 40 CFR 1065.750 for calibration, zero and span checks.

(D) Use a calibration curve conforming to 40 CFR part 1065, subparts C and D, for CO, CO₂, and NO_x for any range on a linear analyzer below 155 ppm.

(iii) Convert the chart deflections or voltage output of analyzers with non-linear calibration curves to concentration values by the calibration curve(s) specified in 40 CFR part 1065, subpart D, before flow correction (if used) and subsequent integration takes place.

88. Section 90.613 is amended by revising paragraph (d) to read as follows:

§ 90.613 Prohibited acts; penalties.

* * * * *

(d) An importer who violates section 213(d) and section 203 of the Act is subject to a civil penalty under section 205 of the Act of not more than \$32,500 for each engine subject to the violation. In addition to the penalty provided in the Act, where applicable, under the exemption provisions of § 90.612(b), a person or entity who fails to deliver the engine to the U.S. Customs Service is liable for liquidated damages in the amount of the bond required by applicable Customs laws and regulations. The maximum penalty value listed in this paragraph (d) is shown for calendar year 2004. Maximum penalty limits for later years may be adjusted based on the Consumer Price Index. The specific regulatory

provisions for changing the maximum penalties, published in 40 CFR part 19, reference the applicable U.S. Code citation on which the prohibited action is based.

89. A new § 90.913 is added to subpart J to read as follows:

§ 90.913 Exemption for engines certified to standards for Large SI engines.

(a) An engine is exempt from the requirements of this part if it is in an engine family that has a valid certificate of conformity showing that it meets emission standards and other requirements under 40 CFR part 1048 for the appropriate model year.

(b) The only requirements or prohibitions from this part that apply to an engine that is exempt under this section are in this section.

(c) If your engines do not have the certificate required in paragraph (a) of this section, they will be subject to the provisions of this part. Introducing these engines into commerce without a valid exemption or certificate of conformity violates the prohibitions in § 90.1003.

(d) Engines exempted under this section are subject to all the requirements affecting engines under 40 CFR part 1048. The requirements and restrictions of 40 CFR part 1048 apply to anyone manufacturing these engines, anyone manufacturing equipment that uses these engines, and all other persons in the same manner as if these were nonroad spark-ignition engines above 19 kW.

(e) Engines exempted under this section may not generate or use emission credits under this part 90.

90. Section 90.1006 is amended by revising paragraphs (a)(1), (a)(2), (a)(5), and (c)(1) and adding paragraph (a)(6) to read as follows:

§ 90.1006 Penalties.

(a) * * *

(1) A person who violates § 90.1003(a)(1), (a)(4), or (a)(5), or a manufacturer or dealer who violates § 90.1003(a)(3)(i), is subject to a civil penalty of not more than \$32,500 for each violation.

(2) A person other than a manufacturer or dealer who violates § 90.1003(a)(3)(i) or any person who violates § 90.1003(a)(3)(ii) is subject to a civil penalty of not more than \$2,750 for each violation.

* * * * *

(5) A person who violates § 90.1003(a)(2) or (a)(6) is subject to a civil penalty of not more than \$32,500 per day of violation.

(6) The maximum penalty values listed in this section are shown for

calendar year 2004. Maximum penalty limits for later years may be adjusted based on the Consumer Price Index. The specific regulatory provisions for changing the maximum penalties, published in 40 CFR part 19, reference the applicable U.S. Code citation on which the prohibited action is based.

* * * * *

(c) * * *

(1) Administrative penalty authority. In lieu of commencing a civil action under paragraph (b) of this section, the Administrator shall assess any civil penalty prescribed in paragraph (a) of this section, except that the maximum amount of penalty sought against each violator in a penalty assessment proceeding can not exceed \$270,000, unless the Administrator and the Attorney General jointly determine that a matter involving a larger penalty amount is appropriate for administrative penalty assessment. Any such determination by the Administrator and the Attorney General is not subject to judicial review. Assessment of a civil penalty is made by an order made on the record after opportunity for a hearing held in accordance with the procedures found at part 22 of this chapter. The Administrator may compromise, or remit, with or without conditions, any administrative penalty which may be imposed under this section.

* * * * *

PART 91—CONTROL OF EMISSIONS FROM MARINE SPARK-IGNITION ENGINES

91. The authority citation for part 91 is revised to read as follows:

Authority: 42 U.S.C. 7401—7671q.

92. Section 91.3 is amended by revising the definitions for “Marine spark-ignition engine”, “Marine vessel”, and “United States”, adding definitions for “Amphibious vehicle”, “Marine engine”, and “Spark-ignition” in alphabetical order to read as follows:

§ 91.3 Definitions.

* * * * *

Amphibious vehicle means a vehicle with wheels or tracks that is designed primarily for operation on land and secondarily for operation in water.

* * * * *

Marine engine means a nonroad engine that is installed or intended to be installed on a marine vessel. This includes a portable auxiliary marine engine only if its fueling, cooling, or exhaust system is an integral part of the vessel. There are two kinds of marine engines:

(1) Propulsion marine engine means a marine engine that moves a vessel through the water or directs the vessel's movement.

(2) Auxiliary marine engine means a marine engine not used for propulsion.

Marine spark-ignition engine means a spark-ignition marine engine that propels a marine vessel.

* * * * *

Marine vessel has the meaning given in 1 U.S.C. 3, except that it does not include amphibious vehicles. The definition in 1 U.S.C. 3 very broadly includes every craft capable of being used as a means of transportation on water.

* * * * *

Spark-ignition means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark-ignition engines usually use a throttle to regulate intake air flow to control power during normal operation.

* * * * *

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

* * * * *

93. Section 91.301 is amended by revising paragraph (c) to read as follows:

§ 91.301 Scope; applicability.

* * * * *

(c) Additional information about system design, calibration methodologies, and so forth, for raw gas sampling can be found in 40 CFR part 1065. Examples for system design, calibration methodologies, and so forth, for dilute sampling can be found in 40 CFR part 1065.

94. Section 91.316 is amended by revising paragraphs (b)(2)(ii) and (c) introductory text to read as follows:

§ 91.316 Hydrocarbon analyzer calibration.

* * * * *

- (b) * * *
- (2) * * *

(ii) The HFID optimization procedures outlined in 40 CFR part 1065, subpart D.

* * * * *

(c) Initial and periodic calibration.

Prior to introduction into service and monthly thereafter, or within one month prior to the certification test, calibrate the FID or HFID hydrocarbon analyzer on all normally used instrument ranges, using the steps in this paragraph. Use the same flow rate and pressures as when analyzing samples. Introduce

calibration gases directly at the analyzer. An optional method for dilute sampling described in 40 CFR part 1065, subpart F, may be used.

* * * * *

95. Section 91.318 is amended by revising paragraph (d) to read as follows:

§ 91.318 Oxides of nitrogen analyzer calibration.

* * * * *

(d) The initial and periodic interference, system check, and calibration test procedures specified in 40 CFR part 1065, subparts C and D, may be used in lieu of the procedures specified in this section.

96. Section 91.320 is amended by revising paragraph (b) to read as follows:

§ 91.320 Carbon dioxide analyzer calibration.

* * * * *

(b) The initial and periodic interference, system check, and calibration test procedures specified in 40 CFR part 1065, subparts C and D, may be used in lieu of the procedures in this section.

97. Section 91.419 is amended by revising the entry defining "M_{HCEXH}" in paragraph (b) to read as follows:

§ 91.419 Raw emission sampling calculations.

* * * * *

- (b) * * *

M_{HCEXH} = Molecular weight of hydrocarbons in the exhaust; see the following equation:

$$M_{HCEXH} = 12.01 + 1.008 \times \alpha$$

* * * * *

98. Section 91.421 is amended by revising paragraph (b)(4)(ii) and (b)(4)(iii) to read as follows:

§ 91.421 Dilute gaseous exhaust sampling and analytical system description.

* * * * *

- (b) * * *
- (4) * * *

(ii) Conform to the continuous NO_x, CO₂, or CO₂ sampling and analysis system to the specifications of 40 CFR 1065.145, with the following exceptions and revisions:

(A) Heat the system components requiring heating only to prevent water condensation, the minimum component temperature is 55 °C.

(B) Coordinate analysis system response time with CVS flow fluctuations and sampling time/test cycle offsets to meet the time-alignment and dispersion specifications in 40 CFR part 1065, subpart C.

(C) Use only analytical gases conforming to the specifications of 40

CFR 1065.750 for calibration, zero, and span checks.

(D) Use a calibration curve conforming to 40 CFR part 1065, subparts C and D, for CO, CO₂, and NO_x for any range on a linear analyzer below 155 ppm.

(iii) Convert the chart deflections or voltage output of analyzers with non-linear calibration curves to concentration values by the calibration curve(s) specified in 40 CFR part 1065, subpart D, before flow correction (if used) and subsequent integration takes place.

* * * * *

99. Section 91.705 is amended by revising paragraph (d) to read as follows:

§ 91.705 Prohibited acts; penalties.

* * * * *

(d) An importer who violates § 91.1103(a)(1), section 213(d) and section 203 of the Act is subject to a civil penalty under § 91.1106 and section 205 of the Act of not more than \$32,500 for each marine engine subject to the violation. In addition to the penalty provided in the Act, where applicable, a person or entity who imports an engine under the exemption provisions of § 91.704(b) and, who fails to deliver the marine engine to the U.S. Customs Service by the end of the period of conditional admission is liable for liquidated damages in the amount of the bond required by applicable Customs laws and regulations. The maximum penalty value listed in this paragraph (d) is shown for calendar year 2004. Maximum penalty limits for later years may be adjusted based on the Consumer Price Index. The specific regulatory provisions for changing the maximum penalties, published in 40 CFR part 19, reference the applicable U.S. Code citation on which the prohibited action is based.

100. Section 91.1106 is amended by revising paragraphs (a)(1), (a)(2), (a)(5), and (c)(1) and adding paragraph (a)(6) to read as follows:

§ 91.1106 Penalties.

- (a) * * *

(1) A person who violates § 91.1103 (a)(1), (a)(4), or (a)(5), or a manufacturer or dealer who violates § 91.1103(a)(3)(i), is subject to a civil penalty of not more than \$32,500 for each violation.

(2) A person other than a manufacturer or dealer who violates § 91.1103(a)(3)(i) or any person who violates § 91.1103(a)(3)(ii) is subject to a civil penalty of not more than \$2,750 for each violation.

* * * * *

(5) A person who violates § 91.1103 (a)(2) or (a)(6) is subject to a civil penalty of not more than \$32,500 per day of violation.

(6) The maximum penalty values listed in this section are shown for calendar year 2004. Maximum penalty limits for later years may be adjusted based on the Consumer Price Index. The specific regulatory provisions for changing the maximum penalties, published in 40 CFR part 19, reference the applicable U.S. Code citation on which the prohibited action is based.

* * * * *

(c) * * *

(1) Administrative penalty authority. In lieu of commencing a civil action under paragraph (b) of this section, the Administrator shall assess any civil penalty prescribed in paragraph (a) of this section, except that the maximum amount of penalty sought against each violator in a penalty assessment proceeding can not exceed \$270,000, unless the Administrator and the Attorney General jointly determine that a matter involving a larger penalty amount is appropriate for administrative penalty assessment. Any such determination by the Administrator and the Attorney General is not subject to judicial review. Assessment of a civil penalty is made by an order made on the record after opportunity for a hearing held in accordance with the procedures found at part 22 of this chapter. The Administrator may compromise, or remit, with or without conditions, any administrative penalty which may be imposed under this section.

* * * * *

PART 92—CONTROL OF AIR POLLUTION FROM LOCOMOTIVES AND LOCOMOTIVE ENGINES

101. The authority citation for part 92 is revised to read as follows:

Authority: 42 U.S.C. 7401–7671q.

102. Section 92.1 is amended by revising paragraphs (a) introductory text, (b)(3), and (b)(4) and adding paragraph (d) to read as follows:

§ 92.1 Applicability.

(a) Except as noted in paragraphs (b) and (d) of this section, the provisions of this part apply to manufacturers, remanufacturers, owners and operators of:

* * * * *

(b) * * *

(3) Locomotive engines which provide only hotel power (see 40 CFR parts 89 and 1039 to determine if such engines

are subject to EPA emission requirements); or

(4) Nonroad vehicles excluded from the definition of locomotive in § 92.2, and the engines used in such nonroad vehicles (see 40 CFR parts 86, 89, and 1039 to determine if such vehicles or engines are subject to EPA emission requirements).

* * * * *

(d) The provisions of subpart L of this part apply to all persons.

103. Section 92.2 is amended in paragraph (b) by revising the definitions for *Calibration*, paragraph (5) of the definition for *New locomotive or new locomotive engine*, *Repower*, and *United States* to read as follows:

§ 92.2 Definitions.

* * * * *

(b) * * *

* * * * *

Calibration means the set of specifications, including tolerances, specific to a particular design, version, or application of a component, or components, or assembly capable of functionally describing its operation over its working range. This definition does apply to Subpart B of this part.

* * * * *

New locomotive or new locomotive engine means: * * *

(5) Notwithstanding paragraphs (1) through (3) of this definition, locomotives and locomotive engines which are owned by a small railroad and which have never been manufactured or remanufactured into a certified configuration are not new.

* * * * *

Repower means replacement of the engine in a previously used locomotive with a freshly manufactured locomotive engine. Replacing a locomotive engine with a freshly manufactured locomotive engine in a locomotive that has a refurbished or reconditioned chassis such that less than 25 percent of the parts of the locomotive were previously used (as weighted by dollar value) is not repowering.

* * * * *

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

* * * * *

104. Section 92.109 is amended by revising paragraph (c)(3) to read as follows:

§ 92.109 Analyzer specifications.

* * * * *

(c) * * *

(3) *Alcohols and Aldehydes*. The sampling and analysis procedures for alcohols and aldehydes, where applicable, shall be approved by the Administrator prior to the start of testing. Procedures are allowed if they are consistent the general requirements of 40 CFR part 1065, subpart I, for sampling and analysis of alcohols and aldehydes, and with good engineering practice.

* * * * *

105. Section 92.114 is amended by revising paragraphs (d)(2) introductory text and (e)(1) to read as follows:

§ 92.114 Exhaust gas and particulate sampling and analytical system.

* * * * *

(d) * * *

(2) For engine testing, either a locomotive-type or a facility-type exhaust system (or a combination system) may be used. The exhaust backpressure for engine testing shall be set between 90 and 100 percent of the maximum backpressure that will result with the exhaust systems of the locomotives in which the engine will be used. Backpressure less than 90 percent of the maximum value is also allowed, provided the backpressure is within 0.07 psi of the maximum value. The facility-type exhaust system shall meet the following requirements:

* * * * *

(e) * * *

(1) Dilution of the exhaust prior to sampling is allowed for gaseous emissions. The equipment and methods used for dilution, sampling and analysis shall comply with the requirements of 40 CFR part 1065, with the following exceptions and additional requirements:

(i) Proportional sampling and heat exchangers are not required;

(ii) Larger minimum dimensions for the dilution tunnel(s) shall be specified by the Administrator;

(iii) Other modifications may be made with written approval from the Administrator.

* * * * *

106. Section 92.123 is amended by revising paragraph (a)(2)(ii) to read as follows:

§ 92.123 Test procedure; general requirements.

(a) * * *

(2) * * *

(ii) None of the measured opacity values for the stack tested are greater than three-quarters of the level allowed by any of the applicable smoke standards.

* * * * *

107. Section 92.124 is amended by revising paragraph (f) to read as follows:

§ 92.124 Test sequence; general requirements.

(f) The required test sequence is described in Table B124-1 of this section, as follows:

* * * * *

TABLE B124-1.—TEST SEQUENCE FOR LOCOMOTIVES AND LOCOMOTIVE ENGINES

Mode Number	Notch setting	Time in notch	Emissions measured**	Power, and fuel consumption measured
Warmup	Notch 8	5 ± 1 min	None	None.
Warmup	Lowest Idle	15 min maximum (after engine speed reaches lowest idle speed).	None	None.
1a	Low Idle*	6 min minimum	All	Both.
1	Normal Idle	6 min minimum	All	Both.
2	Dynamic Brake*	6 min minimum	All	Both.
3	Notch 1	6 min minimum	All	Both.
4	Notch 2	6 min minimum	All	Both.
5	Notch 3	6 min minimum	All	Both.
6	Notch 4	6 min minimum	All	Both.
7	Notch 5	6 min minimum	All	Both.
8	Notch 6	6 min minimum	All	Both.
9	Notch 7	6 min minimum	All	Both.
10	Notch 8	15 min minimum	All	Both.

* Omit if not so equipped.

** The EPA test sequence for locomotives and locomotive engines may be performed once, with gaseous, particulate and smoke measurements performed simultaneously, or it may be performed twice with gaseous, and particulate measurements performed during one test sequence and smoke measurements performed during the other test sequence.

108. Section 92.132 is amended by revising paragraphs (b)(3)(iii)(D)(2) and (d) to read as follows:

§ 92.132 Calculations.

* * * * *

- (b) * * *
- (3) * * *
- (iii) * * *
- (D) * * *

(2) If a CO instrument that meets the criteria specified in 40 CFR part 1065, subpart C, is used without a sample dryer according to 40 CFR 1065.145, CO_{em} must be substituted directly for CO_e and CO_{dm} must be substituted directly for CO_d.

* * * * *

(d) NO_x correction factor. (1) NO_x emission rates (M_{NO_x mode}) shall be adjusted to account for the effects of humidity and temperature by multiplying each emission rate by K_{NO_x}, which is calculated from the following equations:

$$K_{NOx} = (K)(1 + (0.25(\log K)^2)^{1/2})$$

$$K = (K_H)(K_T)$$

$$K_H = [C_1 + C_2 \exp((-0.0143)(10.714))] / [C_1 + C_2 \exp((-0.0143)(1000H))]$$

$$C_1 = -8.7 + 164.5 \exp(-0.0218(A/F)_{wet})$$

$$C_2 = 130.7 + 3941 \exp(-0.0248(A/F)_{wet})$$

Where:

(A/F)_{wet} = Mass of moist air intake divided by mass of fuel intake.

K_T = 1/[1-0.0107(T₃₀ - T_A)] for tests conducted at ambient temperatures below 30°C.

K_T = 1.00 for tests conducted at ambient temperatures at or above 30°C.

T₃₀ = The measured intake manifold air temperature in the locomotive

when operated at 30°C (or 100°C, where intake manifold air temperature is not available).

T_A = The measured intake manifold air temperature in the locomotive as tested (or the ambient temperature (°C), where intake manifold air temperature is not available).

* * * * *

109. Section 92.203 is amended by revising paragraph (d)(1)(i) to read as follows:

§ 92.203 Application for certification.

* * * * *

(d) *Required content.* Each application must include the following information:

(1)(i) A description of the basic engine design including, but not limited to, the engine family specifications, the provisions of which are contained in § 92.204;

* * * * *

110. Section 92.205 is amended by revising paragraph (a) introductory text to read as follows:

§ 92.205 Prohibited controls, adjustable parameters.

(a) Any system installed on, or incorporated in, a new locomotive or new locomotive engine to enable such locomotive or locomotive engine to conform to standards contained in this part:

* * * * *

111. Section 92.208 is amended by revising paragraph (a) to read as follows:

§ 92.208 Certification.

(a) Paragraph (a) of this section applies to manufacturers of new locomotives and new locomotive engines. If, after a review of the application for certification, test reports and data acquired from a freshly manufactured locomotive or locomotive engine or from a development data engine, and any other information required or obtained by EPA, the Administrator determines that the application is complete and that the engine family meets the requirements of the Act and this part, he/she will issue a certificate of conformity with respect to such engine family except as provided by paragraph (c)(3) of this section. The certificate of conformity is valid for each engine family from the date of issuance by EPA until 31 December of the model year or calendar year for which it is issued and upon such terms and conditions as the Administrator deems necessary or appropriate to assure that the production locomotives or engines covered by the certificate will meet the requirements of the Act and of this part.

* * * * *

112. Section 92.210 is amended by revising paragraphs (b)(1), (b)(2), (d)(2), and (d)(3) to read as follows:

§ 92.210 Amending the application and certificate of conformity.

* * * * *

(b) A manufacturer's or remanufacturer's request to amend the application or the existing certificate of

conformity shall include the following information:

(1) A full description of the change to be made in production, or of the locomotives or engines to be added;

(2) Engineering evaluations or data showing that the locomotives or engines as modified or added will comply with all applicable emission standards; and

* * * * *

(d) * * * (2) If the Administrator determines that the change or new locomotive(s) or engine(s) meets the requirements of this part and the Act, the appropriate certificate of conformity shall be amended.

(3) If the Administrator determines that the changed or new locomotive(s) or engine(s) does not meet the requirements of this part and the Act, the certificate of conformity will not be amended. The Administrator shall provide a written explanation to the manufacturer or remanufacturer of the decision not to amend the certificate. The manufacturer or remanufacturer may request a hearing on a denial.

113. Section 92.212 is amended by revising paragraphs (b)(2)(v)(G), (c)(2)(v)(A), and (c)(2)(v)(D)(2) to read as follows:

§ 92.212 Labeling.

* * * * *

(b) * * *

(2) * * *

(v) * * *

(G) The standards and/or FELs to which the locomotive was certified.

(c) * * *

(2) * * *

(v) * * *

(A) The label heading: Engine Emission Control Information.

* * * * *

(D) * * *

(2) This locomotive and locomotive engine conform to U.S. EPA regulations applicable to locomotives and locomotive engines originally manufactured on or after January 1, 2002 and before January 1, 2005; or

* * * * *

114. Section 92.215 is amended by revising paragraphs (a)(2)(i)(A) and (b) to read as follows:

§ 92.215 Maintenance of records; submittal of information; right of entry.

(a) * * *

(2) * * *

(i) * * *

(A) In the case where a current production engine is modified for use as a certification engine or in a certification locomotive, a description of

the process by which the engine was selected and of the modifications made.

In the case where the certification locomotive or the engine for a certification locomotive is not derived from a current production engine, a general description of the buildup of the engine (e.g., whether experimental heads were cast and machined according to supplied drawings). In the cases in the previous two sentences, a description of the origin and selection process for fuel system components, ignition system components, intake-air pressurization and cooling-system components, cylinders, pistons and piston rings, exhaust smoke control system components, and exhaust aftertreatment devices as applicable, shall be included. The required descriptions shall specify the steps taken to assure that the certification locomotive or certification locomotive engine, with respect to its engine, drivetrain, fuel system, emission-control system components, exhaust aftertreatment devices, exhaust smoke control system components or any other devices or components as applicable, that can reasonably be expected to influence exhaust emissions will be representative of production locomotives or locomotive engines and that either: all components and/or locomotive or engine, construction processes, component inspection and selection techniques, and assembly techniques employed in constructing such locomotives or engines are reasonably likely to be implemented for production locomotives or engines; or that they are as close as practicable to planned construction and assembly process.

* * * * *

(b) The manufacturer or remanufacturer of any locomotive or locomotive engine subject to any of the standards prescribed in this part shall submit to the Administrator, at the time of issuance by the manufacturer or remanufacturer, copies of all instructions or explanations regarding the use, repair, adjustment, maintenance, or testing of such locomotive or engine, relevant to the control of crankcase, or exhaust emissions issued by the manufacturer or remanufacturer, for use by other manufacturers or remanufacturers, assembly plants, distributors, dealers, owners and operators. Any material not translated into the English language need not be submitted unless specifically requested by the Administrator.

* * * * *

§ 92.216 [Amended]

115. Section 92.216 is amended by removing and reserving paragraph (a)(2).

116. Section 92.512 is amended by revising paragraph (e) to read as follows:

§ 92.512 Suspension and revocation of certificates of conformity.

* * * * *

(e) The Administrator shall notify the manufacturer or remanufacturer in writing of any suspension or revocation of a certificate of conformity in whole or in part; a suspension or revocation is effective upon receipt of such notification or thirty days from the time an engine family is deemed to be in noncompliance under §§ 92.508(d), 92.510(a), 92.510(b) or 92.511(f), whichever is earlier, except that the certificate is immediately suspended with respect to any failed locomotives or locomotive engines as provided for in paragraph (a) of this section.

* * * * *

117. Section 92.906 is amended by revising paragraph (a) introductory text to read as follows:

§ 92.906 Manufacturer-owned, remanufacturer-owned exemption and display exemption.

(a) Any manufacturer-owned or remanufacturer-owned locomotive or locomotive engine is exempt from § 92.1103, without application, if the manufacturer complies with the following terms and conditions:

* * * * *

118. Section 92.1106 is amended by revising paragraphs (a)(1), (a)(2), (a)(5), and (c)(1) and adding paragraph (a)(6) to read as follows:

§ 92.1106 Penalties.

(a) * * *

(1) A person who violates § 92.1103 (a)(1), (a)(4), or (a)(5), or a manufacturer, remanufacturer, dealer or railroad who violates § 92.1103(a)(3)(i) or (iii) is subject to a civil penalty of not more than \$32,500 for each violation.

(2) A person other than a manufacturer, remanufacturer, dealer, or railroad who violates § 92.1103(a)(3)(i) or any person who violates § 92.1103(a)(3)(ii) is subject to a civil penalty of not more than \$2,750 for each violation.

* * * * *

(5) A person who violates § 92.1103(a)(2) is subject to a civil penalty of not more than \$32,500 per day of violation.

(6) The maximum penalty values listed in this section are shown for calendar year 2004. Maximum penalty limits for later years may be adjusted based on the Consumer Price Index. The

specific regulatory provisions for changing the maximum penalties, published in 40 CFR part 19, reference the applicable U.S. Code citation on which the prohibited action is based.

* * * * *

(c) * * *

(1) *Administrative penalty authority.* In lieu of commencing a civil action under paragraph (b) of this section, the Administrator may assess any civil penalty prescribed in paragraph (a) of this section, except that the maximum amount of penalty sought against each violator in a penalty assessment proceeding shall not exceed \$270,000, unless the Administrator and the Attorney General jointly determine that a matter involving a larger penalty amount is appropriate for administrative penalty assessment. Any such determination by the Administrator and the Attorney General is not subject to judicial review. Assessment of a civil penalty shall be by an order made on the record after opportunity for a hearing held in accordance with the procedures found at part 22 of this chapter. The Administrator may compromise, or remit, with or without conditions, any administrative penalty which may be imposed under this section.

* * * * *

119. Appendix IV to part 92 is amended by revising paragraph (d)(1) to read as follows:

Appendix IV to Part 92—Guidelines for Determining Equivalency Between Emission Measurement Systems

* * * * *

(d) *Minimum number of tests.* The recommended minimum number of tests with each system necessary to determine equivalency is:

(1) Four 10-mode locomotive or locomotive engine tests, conducted in accordance with the provisions of Subpart B of this part; or

* * * * *

PART 94—CONTROL OF AIR POLLUTION FROM MARINE COMPRESSION-IGNITION ENGINES

120. The authority citation for part 94 is revised to read as follows:

Authority: 42 U.S.C. 7401–7671q.

121. Section 94.2 is amended in paragraph (b) by revising the definitions of *marine engine*, *marine vessel*, and *United States* and adding a definition of “Amphibious vehicle” in alphabetical order to read as follows:

§ 94.2 Definitions.

* * * * *

Amphibious vehicle means a vehicle with wheels or tracks that is designed

primarily for operation on land and secondarily for operation in water.

* * * * *

Marine engine means a nonroad engine that is installed or intended to be installed on a marine vessel. This includes a portable auxiliary marine engine only if its fueling, cooling, or exhaust system is an integral part of the vessel. There are two kinds of marine engines:

(1) *Propulsion marine engine* means a marine engine that moves a vessel through the water or directs the vessel’s movement.

(2) *Auxiliary marine engine* means a marine engine not used for propulsion.

Marine vessel has the meaning given in 1 U.S.C. 3, except that it does not include amphibious vehicles. The definition in 1 U.S.C. 3 very broadly includes every craft capable of being used as a means of transportation on water.

* * * * *

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

* * * * *

122. Section 94.107 is amended by revising paragraph (b) to read as follows:

§ 94.107 Determination of maximum test speed.

* * * * *

(b) *Generation of lug curve.* Prior to beginning emission testing, generate maximum measured brakepower versus engine speed data points using the applicable method specified in 40 CFR 1065.510. These data points form the lug curve. It is not necessary to generate the entire lug curve. For the portion of the curve where power increases with increasing speed, it is not necessary to generate points with power less than 90 percent of the maximum power value. For the portion of the curve where power decreases with increasing speed, it is not necessary to generate points with power less than 75 percent of the maximum power value.

* * * * *

123. Section 94.109 is amended by revising paragraph (b) to read as follows:

§ 94.109 Test procedures for Category 3 marine engines.

* * * * *

(b) Analyzers meeting the specifications of either 40 CFR part 1065, subpart C, or ISO 8178–1 (incorporated by reference in § 94.5) shall be used to measure THC and CO.

* * * * *

124. Section 94.904 is amended by adding a new paragraph (c) to read as follows:

§ 94.904 Exemptions.

* * * * *

(c) If you want to take an action with respect to an exempted or excluded engine that is prohibited by the exemption or exclusion, such as selling it, you need to certify the engine. We will issue a certificate of conformity if you send us an application for certification showing that you meet all the applicable requirements from this part 94 and pay the appropriate fee. Also, in some cases, we may allow manufacturers to modify the engine as needed to make it identical to engines already covered by a certificate. We would base such an approval on our review of any appropriate documentation. These engines must have emission control information labels that accurately describe their status.

125. Section 94.907 is amended by revising paragraphs (a), (b), (c), (d) introductory text, (d)(1)(ii), (d)(2), (d)(3)(i), (d)(4), and (g) and adding introductory text to paragraph (h) to read as follows:

§ 94.907 Engine dressing exemption.

(a) *General provisions.* If you are an engine manufacturer, this section allows you to introduce new marine engines into commerce if they are already certified to the requirements that apply to compression-ignition engines under 40 CFR parts 85 and 86 or 40 CFR part 89, 92 or 1039 for the appropriate model year. If you comply with all the provisions of this section, we consider the certificate issued under 40 CFR part 86, 89, 92, or 1039 for each engine to also be a valid certificate of conformity under this part 94 for its model year, without a separate application for certification under the requirements of this part 94.

(b) *Boat builder provisions.* If you are not an engine manufacturer, you may install an engine certified for the appropriate model year under 40 CFR part 86, 89, 92, or 1039 in a marine vessel as long as the engine has been properly labeled as specified in paragraph (d)(5) of this section and you do not make any of the changes described in paragraph (d)(3) of this section. If you modify the non-marine engine in any of the ways described in paragraph (d)(3) of this section, we will consider you a manufacturer of a new marine engine. Such engine modifications prevent you from using the provisions of this section.

(c) *Liability.* Engines for which you meet the requirements of this section are exempt from all the requirements and prohibitions of this part, except for those specified in this section. Engines exempted under this section must meet all the applicable requirements from 40 CFR parts 85 and 86 or 40 CFR part 89, 92, or 1039. This paragraph (c) applies to engine manufacturers, boat builders who use such an engine, and all other persons as if the engine were used in its originally intended application. The prohibited acts of § 94.1103(a)(1) apply to these new engines and vessels; however, we consider the certificate issued under 40 CFR part 86, 89, 92, or 1039 for each engine to also be a valid certificate of conformity under this part 94 for its model year. If we make a determination that these engines do not conform to the regulations during their useful life, we may require you to recall them under this part 94 or under 40 CFR part 85, 89, 92, or 1039.

(d) *Specific requirements.* If you are an engine manufacturer and meet all the following criteria and requirements regarding your new marine engine, the engine is eligible for an exemption under this section:

- (1) * * *
(ii) Land-based nonroad diesel engines (40 CFR part 89 or 1039).
* * * * *
- (2) The engine must have the label required under 40 CFR part 86, 89, 92, or 1039.
* * * * *
- (3) * * *
(i) Change any fuel system parameters from the certified configuration, or change, remove, or fail to properly install any other component, element of design, or calibration specified in the engine manufacturer's application for certification. This includes aftertreatment devices and all related components.
* * * * *

(4) You must show that fewer than 50 percent of the engine model's total sales for the model year, from all companies, are used in marine applications, as follows:

- (i) If you are the original manufacturer of the engine, base this showing on your sales information.
- (ii) In all other cases, you must get the original manufacturer of the engine to confirm this based on its sales information.
* * * * *

(g) *Failure to comply.* If your engines do not meet the criteria listed in paragraph (d) of this section, they will be subject to the standards, requirements, and prohibitions of this

part 94 and the certificate issued under 40 CFR part 86, 89, 92, or 1039 will not be deemed to also be a certificate issued under this part 94. Introducing these engines into commerce without a valid exemption or certificate of conformity under this part violates the prohibitions in 40 CFR 94.1103(a)(1).

(h) *Data submission.* * * *
* * * * *
(i) *Participation in averaging, banking and trading.* Engines adapted for marine use under this section may not generate or use emission credits under this part 94. These engines may generate credits under the ABT provisions in 40 CFR part 86, 89, 92, or 1039, as applicable. These engines must use emission credits under 40 CFR part 86, 89, 92, or 1039 as applicable if they are certified to an FEL that exceeds an applicable standard.

126. A new § 94.912 is added to subpart J to read as follows:

§ 94.912 Optional certification to land-based standards for auxiliary marine engines.

(a) If an engine meets all the following criteria, it is exempt from the requirements of this part:

- (1) The marine engines must be identical in all material respects to a land-based engine covered by a valid certificate of conformity for the appropriate model year showing that it meets emission standards for engines of that power rating under 40 CFR part 89 or 1039.
- (2) The engines may not be used as propulsion marine engines.
- (3) The engines must have the emission control information label we require in 40 CFR 89.110 or 40 CFR 1039.135, including additional information to identify the engine as certified also for auxiliary marine applications.

(4) The number of auxiliary marine engines from the engine family must be smaller than the number of land-based engines from the engine family.

(5) In your application for certification, you must identify your plans to produce engines for both land-based and auxiliary marine applications, including projected sales of marine engines. If the projected marine sales are substantial, we may ask for the year-end report of production volumes to include actual auxiliary marine engine sales.

(b) The only requirements or prohibitions from this part that apply to an engine that is exempt under this section are in this section.

(c) If your engines do not meet the criteria listed in paragraph (a) of this section, they will be subject to all the

requirements and prohibitions of this part. Introducing these engines into commerce without a valid exemption or certificate of conformity violates the prohibitions in § 94.1103.

(d) Engines exempted under this section are subject to all the requirements affecting engines under 40 CFR part 89 or 1039. The requirements and restrictions of 40 CFR part 89 or 1039 apply to anyone manufacturing these engines, anyone manufacturing equipment that uses these engines, and all other persons in the same manner as if these were land-based nonroad diesel engines.

(e) If you produce marine engines under the provisions of this section, include them in your emission-credit calculations in 40 CFR part 89 or 1039, as applicable. Do not count these marine engines in emission-credit calculations under 40 CFR part 94.

(f) The requirements for vessel manufacturers, owners, and operators in subpart K of this part apply to these engines whether they are certified under this part 94 or another part as allowed by this section.

127. Section 94.1001 is revised to read as follows:

§ 94.1001 Applicability.

The requirements of this subpart are applicable to manufacturers, owners, and operators of marine vessels that contain engines with per-cylinder displacement of at least 2.5 liters subject to the provisions of subpart A of this part, except as otherwise specified.

128. Section 94.1103 is amended by redesignating (b)(3)(iv) as (b)(3)(vii), revising paragraph (b)(3)(ii) and (b)(3)(iii), and adding paragraphs (b)(3)(iv) and (b)(3)(viii) to read as follows:

§ 94.1103 Prohibited acts.

- * * * * *
- (b) * * *
- (3) * * *
- (ii) The engine manufacturer or its agent takes ownership and possession of the engine being replaced or confirms that the engine has been destroyed; and
- (iii) If the engine being replaced was not certified to any emission standards under this part, the replacement engine must have a permanent label with your corporate name and trademark and the following language, or similar alternate language approved by the Administrator:

THIS ENGINE DOES NOT COMPLY WITH U.S. EPA MARINE EMISSION REQUIREMENTS. SELLING OR INSTALLING THIS ENGINE FOR ANY PURPOSE OTHER THAN TO REPLACE A MARINE ENGINE BUILT BEFORE

JANUARY 1, [Insert appropriate year reflecting when the earliest tier of standards began to apply to engines of that size and type] MAY BE A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY.

(iv) If the engine being replaced was certified to emission standards less stringent than those in effect when you produce the replacement engine, the replacement engine must have a permanent label with your corporate name and trademark and the following language, or similar alternate language approved by the Administrator:

THIS ENGINE COMPLIES WITH U.S. EPA MARINE EMISSION REQUIREMENTS UNDER THE PROVISIONS OF 40 CFR 94.1103(b)(3). SELLING OR INSTALLING THIS ENGINE FOR ANY PURPOSE OTHER THAN TO REPLACE A MARINE ENGINE BUILT BEFORE JANUARY 1, [Insert appropriate year reflecting when the next tier of emission standards began to apply] MAY BE A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY.

* * * * *

(viii) The provisions of this section may not be used to circumvent emission standards that apply to new engines under this part.

129. Section 94.1106 is amended by revising the introductory text and paragraphs (a)(1), (a)(2), (c)(1), and (d) to read as follows:

§ 94.1106 Penalties.

This section specifies actions that are prohibited and the maximum civil penalties that we can assess for each violation. The maximum penalty values listed in paragraphs (a) and (c) of this section are shown for calendar year 2004. As described in paragraph (d) of this section, maximum penalty limits for later years are set forth in 40 CFR part 19.

(a) * * *

(1) A person who violates § 94.1103(a)(1), (a)(4), (a)(5), (a)(6), or (a)(7)(iv) or a manufacturer or dealer who violates § 94.1103(a)(3)(i) or (iii) or § 94.1103(a)(7) is subject to a civil penalty of not more than \$32,500 for each violation.

(2) A person other than a manufacturer or dealer who violates § 94.1103(a)(3)(i) or (iii) or § 94.1103(a)(7)(i), (ii), or (iii) or any person who violates § 94.1103(a)(3)(ii) is subject to a civil penalty of not more than \$2,750 for each violation.

* * * * *

(c) * * *

(1) Administrative penalty authority. Subject to 42 U.S.C. 7524(c), in lieu of

commencing a civil action under paragraph (b) of this section, the Administrator may assess any civil penalty prescribed in paragraph (a) of this section, except that the maximum amount of penalty sought against each violator in a penalty assessment proceeding shall not exceed \$270,000, unless the Administrator and the Attorney General jointly determine that a matter involving a larger penalty amount is appropriate for administrative penalty assessment. Any such determination by the Administrator and the Attorney General is not subject to judicial review. Assessment of a civil penalty shall be by an order made on the record after opportunity for a hearing held in accordance with the procedures found at part 22 of this chapter. The Administrator may compromise, or remit, with or without conditions, any administrative penalty which may be imposed under this section.

* * * * *

(d) The maximum penalty values listed in paragraphs (a) and (c) of this section are shown for calendar year 2004. Maximum penalty limits for later years may be adjusted based on the Consumer Price Index. The specific regulatory provisions for changing the maximum penalties, published in 40 CFR part 19, reference the applicable U.S. Code citation on which the prohibited action is based.

PART 1039—CONTROL OF EMISSIONS FROM NEW AND IN-USE NONROAD COMPRESSION-IGNITION ENGINES

130. The authority citation for part 1039 is revised to read as follows:

Authority: 42 U.S.C. 7401-7671q.

131. Section 1039.1 is amended by revising paragraph (c) to read as follows:

§ 1039.1 Does this part apply for my engines?

* * * * *

(c) The definition of nonroad engine in 40 CFR 1068.30 excludes certain engines used in stationary applications. These engines are not required to comply with this part, except for the requirements in § 1039.20. In addition, if these engines are uncertified, the prohibitions in 40 CFR 1068.101 restrict their use as nonroad engines.

* * * * *

132. Section 1039.5 is amended by revising paragraphs (b)(1)(iii) and (b)(2) to read as follows:

§ 1039.5 Which engines are excluded from this part's requirements?

* * * * *

(b) *Marine engines.* (1) * * *

(iii) Engines that are exempt from the standards of 40 CFR part 94 pursuant to the provisions of 40 CFR part 94 (except for the provisions of 40 CFR 94.907 or 94.912). For example, an engine that is exempt under 40 CFR 94.906 because it is a manufacturer-owned engine is not subject to the provisions of this part 1039.

* * * * *

(2) Marine engines are subject to the provisions of this part 1039 if they are exempt from 40 CFR part 94 based on the engine-dressing provisions of 40 CFR 94.907 or the common-family provisions of 40 CFR 94.912.

* * * * *

133. Section 1039.10 is amended by revising the introductory text to read as follows:

§ 1039.10 How is this part organized?

The regulations in this part 1039 contain provisions that affect both engine manufacturers and others. However, the requirements of this part are generally addressed to the engine manufacturer. The term "you" generally means the engine manufacturer, as defined in § 1039.801. This part 1039 is divided into the following subparts:

* * * * *

134. Section 1039.104 is amended by revising paragraph (a)(4)(iii) to read as follows:

§ 1039.104 Are there interim provisions that apply only for a limited time?

* * * * *

(a) * * *

(4) * * *

(iii) All other offset-using engines must meet the standards and other provisions that apply in model year 2011 for engines in the 19-130 kW power categories, in model year 2010 for engines in the 130-560 kW power category, or in model year 2014 for engines above 560 kW. Show that engines meet these emission standards by meeting all the requirements of § 1068.265. You must meet the labeling requirements in § 1039.135, but add the following statement instead of the compliance statement in § 1039.135(c)(12): "THIS ENGINE MEETS U.S. EPA EMISSION STANDARDS UNDER 40 CFR 1039.104(a)." For power categories with a percentage phase-in, these engines should be treated as phase-in engines for purposes of determining compliance with phase-in requirements.

* * * * *

135. Section 1039.125 is amended by revising paragraph (g) introductory text to read as follows:

§ 1039.125 What maintenance instructions must I give to buyers?

* * * * *

(g) *Payment for scheduled maintenance.* Owners are responsible for properly maintaining their engines. This generally includes paying for scheduled maintenance. However, manufacturers must pay for scheduled maintenance during the useful life if it meets all the following criteria:

* * * * *

136. Section 1039.130 is amended by revising paragraph (b)(3) to read as follows:

§ 1039.130 What installation instructions must I give to equipment manufacturers?

* * * * *

(b) * * *

(3) Describe the instructions needed to properly install the exhaust system and any other components. Include instructions consistent with the requirements of § 1039.205(u).

* * * * *

137. Section 1039.225 is amended by revising the section heading and adding paragraphs (a)(3) and (f) to read as follows:

§ 1039.225 How do I amend my application for certification to include new or modified engines or to change an FEL?

* * * * *

(a) * * *

(3) Modify an FEL for an engine family, as described in paragraph (f) of this section.

* * * * *

(f) You may ask to change your FEL in the following cases:

(1) You may ask to raise your FEL after the start of production. You may not apply the higher FEL to engines you have already introduced into commerce. Use the appropriate FELs with corresponding sales volumes to calculate your average emission level, as described in subpart H of this part. In your request, you must demonstrate that you will still be able to comply with the applicable average emission standards as specified in subparts B and H of this part.

(2) You may ask to lower the FEL for your engine family after the start of production only when you have test data from production engines indicating that your engines comply with the lower FEL. You may create a separate subfamily with the lower FEL. Otherwise, you must use the higher FEL for the family to calculate your average emission level under subpart H of this part.

(3) If you change the FEL during production, you must include the new FEL on the emission control information

label for all vehicles produced after the change.

138. Section 1039.240 is amended by revising paragraphs (a) and (b) to read as follows:

§ 1039.240 How do I demonstrate that my engine family complies with exhaust emission standards?

(a) For purposes of certification, your engine family is considered in compliance with the applicable numerical emission standards in § 1039.101(a) and (b), § 1039.102(a) and (b), § 1039.104, or § 1039.105 if all emission-data engines representing that family have test results showing deteriorated emission levels at or below these standards. (Note: if you participate in the ABT program in subpart H of this part, your FELs are considered to be the applicable emission standards with which you must comply.)

(b) Your engine family is deemed not to comply if any emission-data engine representing that family has test results showing a deteriorated emission level above an applicable FEL or emission standard from § 1039.101, § 1039.102, § 1039.104, or § 1039.105 for any pollutant.

* * * * *

§ 1039.510 [Amended]

139. Section 1039.510 is amended by removing paragraphs (c) and (d).

140. Section 1039.605 is amended by revising the section heading and adding paragraph (g) to read as follows:

§ 1039.605 What provisions apply to engines certified under the motor-vehicle program?

* * * * *

(g) *Participation in averaging, banking and trading.* Engines adapted for nonroad use under this section may not generate or use emission credits under this part 1039. These engines may generate credits under the ABT provisions in 40 CFR part 86. These engines must use emission credits under 40 CFR part 86 if they are certified to an FEL that exceeds an applicable standard under 40 CFR part 86.

141. Section 1039.610 is amended by revising the section heading and adding paragraph (g) to read as follows:

§ 1039.610 What provisions apply to vehicles certified under the motor-vehicle program?

* * * * *

(g) *Participation in averaging, banking and trading.* Vehicles adapted for nonroad use under this section may not generate or use emission credits under this part 1039. These vehicles may generate credits under the ABT provisions in 40 CFR part 86. These

vehicles must be included in the calculation of the applicable fleet average in 40 CFR part 86.

142. Section 1039.625 is amended by revising paragraph (j) to read as follows:

§ 1039.625 What requirements apply under the program for equipment-manufacturer flexibility?

* * * * *

(j) *Provisions for engine manufacturers.* As an engine manufacturer, you may produce exempted engines as needed under this section. You do not have to request this exemption for your engines, but you must have written assurance from equipment manufacturers that they need a certain number of exempted engines under this section. Send us an annual report of the engines you produce under this section, as described in

§ 1039.250(a). For engines produced under the provisions of paragraph (a)(2) of this section, you must certify the engines under this part 1039. For all other exempt engines, the engines must meet the emission standards in paragraph (e) of this section and you must meet all the requirements of § 1068.265. If you show under § 1068.265(c) that the engines are identical in all material respects to engines that you have previously certified to one or more FELs above the standards specified in paragraph (e) of this section, you must supply sufficient credits for these engines. Calculate these credits under subpart H of this part using the previously certified FELs and the alternate standards. You must meet the labeling requirements in 40 CFR 89.110, but add the following statement instead of the compliance statement in 40 CFR 89.110(b)(10):

THIS ENGINE MEETS U.S. EPA EMISSION STANDARDS UNDER 40 CFR 1039.625. SELLING OR INSTALLING THIS ENGINE FOR ANY PURPOSE OTHER THAN FOR THE EQUIPMENT FLEXIBILITY PROVISIONS OF 40 CFR 1039.625 MAY BE A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY.

* * * * *

143. Section 1039.655 is amended by revising paragraph (a)(3) to read as follows:

§ 1039.655 What special provisions apply to engines sold in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) * * *

(3) You meet all the requirements of § 1068.265.

* * * * *

144. Section 1039.705 amended by adding text to paragraph (c)(4) to read as follows:

§ 1039.705 How do I generate and calculate emission credits?

* * * * *

(c) * * *

(4) Engines for which the location of first retail sale is in a state that has applicable emission regulations for that model year. For example, you may not include engines sold in California if it has emission standards for these engines, and you may not include engines sold in other states that adopt California's emission standards under Clean Air Act section 209(e)(2)(B).

* * * * *

145. Section 1039.740 amended by adding paragraph (b)(4) to read as follows:

§ 1039.740 What restrictions apply for using emission credits?

* * * * *

(b) * * *

(4) If the maximum power of an engine generating credits under the Tier 2 standards in 40 CFR part 89 is at or above 37 kW and below 75 kW, you may use those credits for certifying engines under the Option #1 standards in § 1039.102.

* * * * *

146. Section 1039.801 is amended by revising the definitions for Aftertreatment, Brake power, Constant-speed operation, Exempted, Good engineering judgment, Marine engine, Marine vessel, Motor vehicle, Revoke, Suspend, United States, and Void and adding a definition for Amphibious vehicle to read as follows:

§ 1039.801 What definitions apply to this part?

* * * * *

Aftertreatment means relating to a catalytic converter, particulate filter, or any other system, component, or technology mounted downstream of the exhaust valve (or exhaust port) whose design function is to decrease emissions in the engine exhaust before it is exhausted to the environment. Exhaust-gas recirculation (EGR) and turbochargers are not aftertreatment.

* * * * *

Amphibious vehicle means a vehicle with wheels or tracks that is designed primarily for operation on land and secondarily for operation in water.

* * * * *

Brake power means the usable power output of the engine, not including power required to fuel, lubricate, or heat the engine, circulate coolant to the

engine, or to operate aftertreatment devices.

* * * * *

Constant-speed operation means engine operation with a governor that controls the operator input to maintain an engine at a reference speed, even under changing load. For example, an isochronous governor changes reference speed temporarily during a load change, then returns the engine to its original reference speed after the engine stabilizes. Isochronous governors typically allow speed changes up to 1.0%. Another example is a speed-droop governor, which has a fixed reference speed at zero load and allows the reference speed to decrease as load increases. With speed-droop governors, speed typically decreases (3 to 10)% below the reference speed at zero load, such that the minimum reference speed occurs near the engine's point of maximum power.

* * * * *

Exempted has the meaning we give in 40 CFR 1068.30.

* * * * *

Good engineering judgment has the meaning we give in 40 CFR 1068.30. See 40 CFR 1068.5 for the administrative process we use to evaluate good engineering judgment.

* * * * *

Marine engine means a nonroad engine that is installed or intended to be installed on a marine vessel. This includes a portable auxiliary marine engine only if its fueling, cooling, or exhaust system is an integral part of the vessel. There are two kinds of marine engines:

(1) Propulsion marine engine means a marine engine that moves a vessel through the water or directs the vessel's movement.

(2) Auxiliary marine engine means a marine engine not used for propulsion.

Marine vessel has the meaning given in 1 U.S.C. 3, except that it does not include amphibious vehicles. The definition in 1 U.S.C. 3 very broadly includes every craft capable of being used as a means of transportation on water.

* * * * *

Motor vehicle has the meaning we give in 40 CFR 85.1703(a). In general, motor vehicle means any vehicle that EPA deems to be capable of safe and practical use on streets or highways that has a maximum ground speed above 40 kilometers per hour (25 miles per hour) over level, paved surfaces.

* * * * *

Revoke has the meaning we give in 40 CFR 1068.30.

* * * * *

Suspend has the meaning we give in 40 CFR 1068.30.

* * * * *

United States has the meaning we give in 40 CFR 1068.30.

* * * * *

Void has the meaning we give in 40 CFR 1068.30.

* * * * *

PART 1048—CONTROL OF EMISSIONS FROM NEW, LARGE NONROAD SPARK-IGNITION ENGINES

147. The authority citation for part 1048 is revised to read as follows:

Authority: 42 U.S.C. 7401—7671q.

148. The heading for subpart A is revised to read as follows:

Subpart A—Overview and Applicability

149. Section 1048.1 is revised to read as follows:

§ 1048.1 Does this part apply to me?

(a) The regulations in this part 1048 apply for all new, spark-ignition nonroad engines (defined in § 1048.801) with maximum engine power above 19 kW, except as provided in § 1048.5.

(b) This part 1048 applies for engines built on or after January 1, 2004. You need not follow this part for engines you produce before January 1, 2004. See §§ 1048.101 through 1048.115, § 1048.145, and the definition of model year in § 1048.801 for more information about the timing of new requirements.

(c) The definition of nonroad engine in 40 CFR 1068.30 excludes certain engines used in stationary applications. These engines are not required to comply with this part, except for the requirements in § 1048.20. In addition, if these engines are uncertified, the prohibitions in 40 CFR 1068.101 restrict their use as nonroad engines.

(d) In certain cases, the regulations in this part 1048 apply to engines with maximum engine power at or below 19 kW that would otherwise be covered by 40 CFR part 90. See 40 CFR 90.913 for provisions related to this allowance.

150. Section 1048.5 is revised to read as follows:

§ 1048.5 Which engines are excluded from this part's requirements?

This part does not apply to the following nonroad engines:

(a) Engines that are certified to meet the requirements of 40 CFR part 1051, or are otherwise subject to 40 CFR part 1051 (for example, engines used in snowmobiles and all-terrain vehicles).

(b) Propulsion marine engines. See 40 CFR part 91. This part applies with respect to auxiliary marine engines.

151. Section 1048.10 is revised to read as follows:

§ 1048.10 How is this part organized?

The regulations in this part 1048 contain provisions that affect both engine manufacturers and others. However, the requirements of this part are generally addressed to the engine manufacturer. The term "you" generally means the engine manufacturer, as defined in § 1048.801. This part 1048 is divided into the following subparts:

(a) Subpart A of this part defines the applicability of part 1048 and gives an overview of regulatory requirements.

(b) Subpart B of this part describes the emission standards and other requirements that must be met to certify engines under this part. Note that § 1048.145 discusses certain interim requirements and compliance provisions that apply only for a limited time.

(c) Subpart C of this part describes how to apply for a certificate of conformity.

(d) Subpart D of this part describes general provisions for testing production-line engines.

(e) Subpart E of this part describes general provisions for testing in-use engines.

(f) Subpart F of this part describes how to test your engines (including references to other parts of the Code of Federal Regulations).

(g) Subpart G of this part and 40 CFR part 1068 describe requirements, prohibitions, and other provisions that apply to engine manufacturers, equipment manufacturers, owners, operators, rebuilders, and all others.

(h) [Reserved]

(i) Subpart I of this part contains definitions and other reference information.

152. Section 1048.15 is revised to read as follows:

§ 1048.15 Do any other regulation parts affect me?

(a) Part 1065 of this chapter describes procedures and equipment specifications for testing engines. Subpart F of this part 1048 describes how to apply the provisions of part 1065 of this chapter to determine whether engines meet the emission standards in this part.

(b) The requirements and prohibitions of part 1068 of this chapter apply to everyone, including anyone who manufactures, imports, installs, owns, operates, or rebuilds any of the engines subject to this part 1048, or equipment containing these engines. Part 1068 of

this chapter describes general provisions, including these seven areas:

(1) Prohibited acts and penalties for engine manufacturers, equipment manufacturers, and others.

(2) Rebuilding and other aftermarket changes.

(3) Exclusions and exemptions for certain engines.

(4) Importing engines.

(5) Selective enforcement audits of your production.

(6) Defect reporting and recall.

(7) Procedures for hearings.

(c) Other parts of this chapter apply if referenced in this part.

153. Section 1048.20 is revised to read as follows:

§ 1048.20 What requirements from this part apply to excluded stationary engines?

(a) You must add a permanent label or tag to each new engine you produce or import that is excluded under § 1048.1(c) as a stationary engine. To meet labeling requirements, you must do the following things:

(1) Attach the label or tag in one piece so no one can remove it without destroying or defacing it.

(2) Secure it to a part of the engine needed for normal operation and not normally requiring replacement.

(3) Make sure it is durable and readable for the engine's entire life.

(4) Write it in English.

(5) Follow the requirements in § 1048.135(g) regarding duplicate labels if the engine label is obscured in the final installation.

(b) Engine labels or tags required under this section must have the following information:

(1) Include the heading "EMISSION CONTROL INFORMATION".

(2) Include your full corporate name and trademark. You may instead include the full corporate name and trademark of another company you choose to designate.

(3) State the engine displacement (in liters) and maximum engine power.

(4) State: "THIS ENGINE IS EXCLUDED FROM THE REQUIREMENTS OF 40 CFR PART 1048 AS A "STATIONARY ENGINE." INSTALLING OR USING THIS ENGINE IN ANY OTHER APPLICATION MAY BE A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY."

154. Section 1048.101 is amended by revising the introductory text and paragraphs (a), (b), (c), (e), (g), and (h) to read as follows:

§ 1048.101 What exhaust emission standards must my engines meet?

The exhaust emission standards of this section apply by model year. You

may certify engines earlier than we require. The Tier 1 standards apply only to steady-state testing, as described in paragraph (b) of this section. The Tier 2 standards apply to steady-state, transient, and field testing, as described in paragraphs (a), (b), and (c) of this section.

(a) *Emission standards for transient testing.* Starting in the 2007 model year, transient exhaust emissions from your engines may not exceed the Tier 2 emission standards, as follows:

(1) Measure emissions using the applicable transient test procedures described in subpart F of this part.

(2) The Tier 2 HC+NO_x standard is 2.7 g/kW-hr and the Tier 2 CO standard is 4.4 g/kW-hr. For severe-duty engines, the Tier 2 HC+NO_x standard is 2.7 g/kW-hr and the Tier 2 CO standard is 130.0 g/kW-hr. High-load engines and engines with maximum engine power above 560 kW are not subject to the transient standards in this paragraph (a).

(3) You may optionally certify your engines according to the following formula instead of the standards in paragraph (a)(1) of this section: $(HC+NO_x) \times CO^{0.784} \leq 8.57$. The HC+NO_x and CO emission levels you select to satisfy this formula, rounded to the nearest 0.1 g/kW-hr, become the emission standards that apply for those engines. You may not select an HC+NO_x emission standard higher than 2.7 g/kW-hr or a CO emission standard higher than 20.6 g/kW-hr. The following table illustrates a range of possible values under this paragraph (a)(3):

TABLE 1 OF § 1048.101.—EXAMPLES OF POSSIBLE TIER 2 DUTY-CYCLE EMISSION STANDARDS

HC+NO _x (g/kW-hr)	CO (g/kW-hr)
2.7	4.4
2.2	5.6
1.7	7.9
1.3	11.1
1.0	15.5
0.8	20.6

(b) *Standards for steady-state testing.* Except as we allow in paragraph (d) of this section, steady-state exhaust emissions from your engines may not exceed emission standards, as follows:

(1) Measure emissions using the applicable steady-state test procedures described in subpart F of this part:

(2) The following table shows the Tier 1 exhaust emission standards that apply to engines from 2004 through 2006 model years:

TABLE 2 OF § 1048.101.—TIER 1 EMISSION STANDARDS (G/KW-HR)

Testing	General emission standards		Alternate emission standards for severe-duty engines	
	HC+NO _x	CO	HC+NO _x	CO
Certification and production-line testing	4.0	50.0	4.0	130.0
In-use testing	5.4	50.0	5.4	130.0

(3) Starting in the 2007 model year, steady-state exhaust emissions from your engines may not exceed the numerical emission standards in paragraph (a) of this section. See paragraph (d) of this section for alternate standards that apply for certain engines.

(c) *Standards for field testing.* Starting in 2007, exhaust emissions may not exceed field-testing standards, as follows:

(1) Measure emissions using the field-testing procedures in subpart F of this part.

(2) The HC+NO_x standard is 3.8 g/kW-hr and the CO standard is 6.5 g/kW-hr. For severe-duty engines, the HC+NO_x standard is 3.8 g/kW-hr and the CO standard is 200.0 g/kW-hr. For natural gas-fueled engines, you are not required to measure nonmethane hydrocarbon emissions or total hydrocarbon emissions for testing to show that the engine meets the emission standards of this paragraph (c); that is, you may assume HC emissions are equal to zero.

(3) You may apply the following formula to determine alternate emission standards that apply to your engines instead of the standards in paragraph (c)(1) of this section: $(HC+NO_x) \times CO^{0.791} \leq 16.78$. HC+NO_x emission levels may not exceed 3.8 g/kW-hr and CO emission levels may not exceed 31.0 g/kW-hr. The following table illustrates a range of possible values under this paragraph (c)(2):

TABLE 3 OF § 1048.101.—EXAMPLES OF POSSIBLE TIER 2 FIELD-TESTING EMISSION STANDARDS

HC+NO _x (g/kW-hr)	CO (g/kW-hr)
3.8	6.5
3.1	8.5
2.4	11.7
1.8	16.8
1.4	23.1
1.1	31.0

* * * * *

(e) *Fuel types.* The exhaust emission standards in this section apply for engines using each type of fuel specified

in 40 CFR part 1065, subpart C, on which the engines in the engine family are designed to operate, except for engines certified under § 1048.625. For engines certified under § 1048.625, the standards of this section apply to emissions measured using the specified test fuel. You must meet the numerical emission standards for hydrocarbons in this section based on the following types of hydrocarbon emissions for engines powered by the following fuels:

(1) Gasoline- and LPG-fueled engines: THC emissions.

(2) Natural gas-fueled engines: NMHC emissions.

(3) Alcohol-fueled engines: THCE emissions.

* * * * *

(g) *Useful life.* Your engines must meet the exhaust emission standards in paragraphs (a) through (c) of this section over their full useful life. The minimum useful life is 5,000 hours of operation or seven years, whichever comes first.

(1) Specify a longer useful life in hours for an engine family under either of two conditions:

(i) If you design, advertise, or market your engine to operate longer than the minimum useful life (your recommended hours until rebuild may indicate a longer design life).

(ii) If your basic mechanical warranty is longer than the minimum useful life.

(2) You may request in your application for certification that we approve a shorter useful life for an engine family. We may approve a shorter useful life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter useful life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical

warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The useful life value may not be shorter than any of the following:

(i) 1,000 hours of operation.

(ii) Your recommended overhaul interval.

(iii) Your mechanical warranty for the engine.

(h) *Applicability for testing.* The emission standards in this subpart apply to all testing, including certification, production-line, and in-use testing. For production-line testing, you must perform duty-cycle testing as specified in §§ 1048.505 and 1048.510. The field-testing standards of this section apply for those tests. You need not do additional testing of production-line engines to show that your engines meet the field-testing standards.

155. Section 1048.105 is amended by revising the section heading and adding introductory text to read as follows:

§ 1048.105 What evaporative emission standards and requirements apply?

The requirements of this section apply to all engines that are subject to this part, except auxiliary marine engines.

* * * * *

156. Section 1048.115 is amended by revising the introductory text and paragraphs (a), (e), and (g) to read as follows:

§ 1048.115 What other requirements must my engines meet?

Engines subject to this part must meet the following requirements:

(a) *Crankcase emissions.* Crankcase emissions may not be discharged directly into the ambient atmosphere from any engine, except as follows:

(1) Engines may discharge crankcase emissions to the ambient atmosphere if the emissions are added to the exhaust emissions (either physically or mathematically) during all emission testing.

(2) If you take advantage of this exception, you must do the following things:

(i) Manufacture the engines so that all crankcase emissions can be routed into the applicable sampling systems specified in 40 CFR part 1065.

(ii) Account for deterioration in crankcase emissions when determining exhaust deterioration factors.

(3) For purposes of this paragraph (a), crankcase emissions that are routed to the exhaust upstream of exhaust aftertreatment during all operation are not considered to be discharged directly into the ambient atmosphere.

* * * * *

(e) *Adjustable parameters.* Engines that have adjustable parameters must meet all the requirements of this part for any adjustment in the physically adjustable range. An operating parameter is not considered adjustable if you permanently seal it or if it is not normally accessible using ordinary tools. We may require that you set adjustable parameters to any specification within the adjustable range during any testing, including certification testing, selective enforcement auditing, or in-use testing.

* * * * *

(g) *Defeat devices.* You may not equip your engines with a defeat device. A defeat device is an auxiliary emission-control device that reduces the effectiveness of emission controls under conditions that the engine may reasonably be expected to encounter during normal operation and use. This does not apply to auxiliary-emission control devices you identify in your certification application if any of the following is true:

(1) The conditions of concern were substantially included in the applicable test procedures described in subpart F of this part.

(2) You show your design is necessary to prevent engine (or equipment) damage or accidents.

(3) The reduced effectiveness applies only to starting the engine.

157. Section 1048.120 is revised to read as follows:

§ 1048.120 What emission-related warranty requirements apply to me?

(a) *General requirements.* You must warrant to the ultimate purchaser and each subsequent purchaser that the new nonroad engine, including all parts of its emission-control system, meets two conditions:

(1) It is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of this part.

(2) It is free from defects in materials and workmanship that may keep it from meeting these requirements.

(b) *Warranty period.* Your emission-related warranty must be valid for at least 50 percent of the engine's useful life in hours of operation or at least three years, whichever comes first. In the case of a high-cost warranted part, the warranty must be valid for at least 70 percent of the engine's useful life in hours of operation or at least five years, whichever comes first. You may offer an emission-related warranty more generous than we require. The emission-related warranty for the engine may not be shorter than any published warranty you offer without charge for the engine. Similarly, the emission-related warranty for any component may not be shorter than any published warranty you offer without charge for that component. If you provide an extended warranty to individual owners for any components covered in paragraph (c) of this section for an additional charge, your emission-related warranty must cover those components for those owners to the same degree. If an engine has no hour meter, we base the warranty periods in this paragraph (b) only on the engine's age (in years). The warranty period begins when the engine is placed into service.

(c) *Components covered.* The emission-related warranty covers all components whose failure would increase an engine's emissions of any pollutant. This includes components listed in 40 CFR part 1068, Appendix I, and components from any other system you develop to control emissions. The emission-related warranty covers these components even if another company produces the component. Your emission-related warranty does not cover components whose failure would not increase an engine's emissions of any pollutant.

(d) *Limited applicability.* You may deny warranty claims under this section if the operator caused the problem through improper maintenance or use, as described in 40 CFR 1068.115.

(e) *Owners manual.* Describe in the owners manual the emission-related warranty provisions from this section that apply to the engine.

158. Section 1048.125 is revised to read as follows:

§ 1048.125 What maintenance instructions must I give to buyers?

Give the ultimate purchaser of each new nonroad engine written instructions for properly maintaining and using the engine, including the emission-control system. The maintenance instructions also apply to service accumulation on your emission-data engines, as described in 40 CFR part 1065.

(a) *Critical emission-related maintenance.* Critical emission-related maintenance includes any adjustment, cleaning, repair, or replacement of critical emission-related components. This may also include additional emission-related maintenance that you determine is critical if we approve it in advance. You may schedule critical emission-related maintenance on these components if you meet the following conditions:

(1) You demonstrate that the maintenance is reasonably likely to be done at the recommended intervals on in-use engines. We will accept scheduled maintenance as reasonably likely to occur if you satisfy any of the following conditions:

(i) You present data showing that, if a lack of maintenance increases emissions, it also unacceptably degrades the engine's performance.

(ii) You present survey data showing that at least 80 percent of engines in the field get the maintenance you specify at the recommended intervals.

(iii) You provide the maintenance free of charge and clearly say so in maintenance instructions for the customer.

(iv) You otherwise show us that the maintenance is reasonably likely to be done at the recommended intervals.

(2) You may not schedule critical emission-related maintenance more frequently than the following minimum intervals, except as specified in paragraphs (a)(3), (b) and (c) of this section:

(i) For catalysts, fuel injectors, electronic control units, superchargers, and turbochargers: the useful life of the engine family.

(ii) For gaseous fuel-system components (cleaning without disassembly only) and oxygen sensors: 2,500 hours.

(3) If your engine family has an alternate useful life under § 1048.101(g) that is shorter than the period specified in paragraph (a)(2)(ii) of this section, you may not schedule critical emission-related maintenance more frequently than the alternate useful life, except as specified in paragraph (c) of this section.

(b) *Recommended additional maintenance.* You may recommend any additional amount of maintenance on the components listed in paragraph (a) of this section, as long as you state clearly that these maintenance steps are not necessary to keep the emission-related warranty valid. If operators do the maintenance specified in paragraph (a) of this section, but not the recommended additional maintenance, this does not allow you to disqualify

those engines from in-use testing or deny a warranty claim. Do not take these maintenance steps during service accumulation on your emission-data engines.

(c) *Special maintenance.* You may specify more frequent maintenance to address problems related to special situations, such as standard fuel or atypical engine operation. For example, you may specify more frequent cleaning of fuel system components for engines you have reason to believe will be using fuel that causes substantially more engine performance problems than commercial fuels of the same type that are generally available across the United States. You must clearly state that this additional maintenance is associated with the special situation you are addressing.

(d) *Noncritical emission-related maintenance.* You may schedule any amount of emission-related inspection or maintenance that is not covered by paragraph (a) of this section, as long as you state in the owners manual that these steps are not necessary to keep the emission-related warranty valid. If operators fail to do this maintenance, this does not allow you to disqualify those engines from in-use testing or deny a warranty claim. Do not take these inspection or maintenance steps during service accumulation on your emission-data engines.

(e) *Maintenance that is not emission-related.* For maintenance unrelated to emission controls, you may schedule any amount of inspection or maintenance. You may also take these inspection or maintenance steps during service accumulation on your emission-data engines, as long as they are reasonable and technologically necessary. This might include adding engine oil, changing air, fuel, or oil filters, servicing engine-cooling systems, and adjusting idle speed, governor, engine bolt torque, valve lash, or injector lash. You may perform this nonemission-related maintenance on emission-data engines at the least frequent intervals that you recommend to the ultimate purchaser (but not the intervals recommended for severe service).

(f) *Source of parts and repairs.* State clearly on the first page of your written maintenance instructions that a repair shop or person of the owner's choosing may maintain, replace, or repair emission-control devices and systems. Your instructions may not require components or service identified by brand, trade, or corporate name. Also, do not directly or indirectly condition your warranty on a requirement that the equipment be serviced by your

franchised dealers or any other service establishments with which you have a commercial relationship. You may disregard the requirements in this paragraph (f) if you do one of two things:

(1) Provide a component or service without charge under the purchase agreement.

(2) Get us to waive this prohibition in the public's interest by convincing us the engine will work properly only with the identified component or service.

(g) *Payment for scheduled maintenance.* Owners are responsible for properly maintaining their engines. This generally includes paying for scheduled maintenance. However, manufacturers must pay for scheduled maintenance during the useful life if it meets all the following criteria:

(1) Each affected component was not in general use on similar engines before January 1, 2004.

(2) The primary function of each affected component is to reduce emissions.

(3) The cost of the scheduled maintenance is more than 2 percent of the price of the engine.

(4) Failure to perform the maintenance would not cause clear problems that would significantly degrade the engine's performance.

(h) *Owners manual.* Explain the owner's responsibility for proper maintenance in the owners manual.

159. Section 1048.130 is amended by revising paragraphs (a), (b)(3), (b)(7), and (b)(8); and by adding paragraph (d) to read as follows:

§ 1048.130 What installation instructions must I give to equipment manufacturers?

(a) If you sell an engine for someone else to install in a piece of nonroad equipment, give the engine installer instructions for installing it consistent with the requirements of this part. Include all information necessary to ensure that an engine will be installed in its certified configuration.

(b) * * *

(3) Describe the instructions needed to properly install the exhaust system and any other components. Include instructions consistent with the requirements of § 1048.205(v).

* * * * *

(7) Describe any other instructions to make sure the installed engine will operate according to design specifications in your application for certification. This may include, for example, instructions for installing aftertreatment devices when installing the engines.

(8) State: "If you install the engine in a way that makes the engine's emission

control information label hard to read during normal engine maintenance, you must place a duplicate label on the equipment, as described in 40 CFR 1068.105."

* * * * *

(d) Provide instructions in writing or in an equivalent format. For example, you may post instructions on a publicly available website for downloading or printing. If you do not provide the instructions in writing, explain in your application for certification how you will ensure that each installer is informed of the installation requirements.

160. Section 1048.135 is revised to read as follows:

§ 1048.135 How must I label and identify the engines I produce?

(a) Assign each engine a unique identification number and permanently affix, engrave, or stamp it on the engine in a legible way.

(b) At the time of manufacture, affix a permanent and legible label identifying each engine. The label must be—

(1) Attached in one piece so it is not removable without being destroyed or defaced.

(2) Secured to a part of the engine needed for normal operation and not normally requiring replacement.

(3) Durable and readable for the engine's entire life.

(4) Written in English.

(c) The label must—

(1) Include the heading "EMISSION CONTROL INFORMATION".

(2) Include your full corporate name and trademark. You may identify another company and use its trademark instead of yours if you comply with the provisions of § 1048.635.

(3) Include EPA's standardized designation for the engine family (and subfamily, where applicable).

(4) State the engine's displacement (in liters); however, you may omit this from the label if all the engines in the engine family have the same per-cylinder displacement and total displacement.

(5) State the date of manufacture [MONTH and YEAR]. You may omit this from the label if you keep a record of the engine-manufacture dates and provide it to us upon request.

(6) Identify the emission-control system. Use terms and abbreviations consistent with SAE J1930 (incorporated by reference in § 1048.810). You may omit this information from the label if there is not enough room for it and you put it in the owners manual instead.

(7) State: "THIS ENGINE IS CERTIFIED TO OPERATE ON [specify operating fuel or fuels]."

(8) Identify any requirements for fuel and lubricants. You may omit this information from the label if there is not enough room for it and you put it in the owners manual instead.

(9) List specifications and adjustments for engine tuneups; show the proper position for the transmission during tuneup and state which accessories should be operating. You may omit this information from the label if there is not enough room for it and you put it in the owners manual instead.

(10) State the useful life for your engine family if it has a longer useful life under § 1048.101(g)(1) or a shortened useful life under § 1048.101(g)(2).

(11) Identify the emission standards to which you have certified the engine.

(12) State: "THIS ENGINE COMPLIES WITH U.S. EPA REGULATIONS FOR [MODEL YEAR] LARGE NONROAD SI ENGINES."

(13) If your engines are certified only for constant-speed operation, state: "USE IN CONSTANT-SPEED APPLICATIONS ONLY".

(14) If your engines are certified only for variable-speed operation, state: "USE IN VARIABLE-SPEED APPLICATIONS ONLY".

(15) If your engines are certified only for high-load engines, state: "THIS ENGINE IS NOT INTENDED FOR OPERATION AT LESS THAN 75 PERCENT OF FULL LOAD."

(16) If you certify your engines under § 1048.101(d) (and show in your application for certification that in-use engines will experience infrequent high-load operation), state: "THIS ENGINE IS NOT INTENDED FOR OPERATION AT MORE THAN PERCENT OF FULL LOAD.". Specify the appropriate percentage of full load based on the nature of the engine protection. You may add other statements to discourage operation in engine-protection modes.

(17) If your engines are certified to the voluntary standards in § 1048.140, state: "BLUE SKY SERIES".

(d) You may add information to the emission control information label to identify other emission standards that the engine meets or does not meet (such as California standards). You may also add other information to ensure that the engine will be properly maintained and used.

(e) You may ask us to approve modified labeling requirements in this part 1048 if you show that it is necessary or appropriate. We will approve your request if your alternate

label is consistent with the requirements of this part.

(f) If you obscure the engine label while installing the engine in the equipment, you must place a duplicate label on the equipment. If others install your engine in their equipment in a way that obscures the engine label, we require them to add a duplicate label on the equipment (see 40 CFR 1068.105); in that case, give them the number of duplicate labels they request and keep the following records for at least five years:

(1) Written documentation of the request from the equipment manufacturer.

(2) The number of duplicate labels you send and the date you sent them.

161. Section 1048.140 is amended by revising paragraph (c) to read as follows:

§ 1048.140 What are the provisions for certifying Blue Sky Series engines?

* * * * *

(c) For any model year, to receive a certificate of conformity as a "Blue Sky Series" engine family must meet all the requirements in this part while certifying to one of the sets of exhaust emission standards in the following table:

TABLE 1 OF § 1048.140—LONG-TERM STANDARDS FOR BLUE SKY SERIES ENGINES (G/kW-HR)

Level	Standards for steady-state and transient test procedures		Standards for field-testing procedures	CO
	HC+NO _x	CO	NC+NO _x	
Blue Sky	0.80	4.4	1.10	6.6
Advanced Blue Sky	0.30	3.0	0.42	4.5
Premium Blue Sky	0.15	3.0	0.21	4.5

* * * * *
162. Section 1048.145 is amended by revising the section heading and paragraph (a) and by removing and reserving paragraph (c) to read as follows:

§ 1048.145 Are there interim provisions that apply only for a limited time?

* * * * *

(a) *Family banking.* This paragraph (a) allows you to reduce the number of engines subject to the Tier 2 standards by certifying some of your engines earlier than otherwise required, as follows:

(1) For early-compliant engines to generate offsets under this paragraph (a), you must meet the following general provisions:

(i) You must begin actual production of early-compliant engines by September 1, 2006.

(ii) Engines you produce after December 31, 2006 may not generate offsets.

(iii) Offset-generating engines must be certified to the Tier 2 standards and requirements under this part 1048.

(iv) If you certify engines under the voluntary standards of § 1048.140, you may not use them in your calculation under this paragraph (a).

(2) For every offset-generating engine certified to the Tier 2 standards, you may reduce the number of engines with the same maximum engine power that are required to meet the Tier 2 standards in later model years by one engine. You may calculate power-weighted offsets based on actual U.S.-directed sales volumes. For example, if you produce a total of 1,000 engines in 2005 and 2006 with an average maximum power of 60 kW certified to the Tier 2 standards, you may delay certification to that tier of

standards for up to 60,000 kW-engine-years in any of the following ways:

(i) Delay certification of up to 600 engines with an average maximum power of 100 kW for one model year.

(ii) Delay certification of up to 200 engines with an average maximum power of 100 kW for three consecutive model years.

(iii) Delay certification of up to 400 engines with an average maximum power of 100 kW for one model year and up to 50 engines with an average maximum power of 200 kW for two model years.

(3) Offset-using engines (that is, those not required to certify to the Tier 2 standards) must be certified to the Tier 1 standards and requirements of this part 1048. You may delay compliance for up to three model years.

(4) By January 31 of each year in which you use the provisions of this

paragraph (a), send us a report describing how many offset-generating or offset-using engines you produced in the preceding model year.

* * * * *

163. Section 1048.201 is revised to read as follows:

§ 1048.201 What are the general requirements for obtaining a certificate of conformity?

(a) You must send us a separate application for a certificate of conformity for each engine family. A certificate of conformity is valid from the indicated effective date until December 31 of the model year for which it is issued.

(b) The application must contain all the information required by this part and must not include false or incomplete statements or information (see § 1048.255).

(c) We may ask you to include less information than we specify in this subpart, as long as you maintain all the information required by § 1048.250.

(d) You must use good engineering judgment for all decisions related to your application (see 40 CFR 1068.5).

(e) An authorized representative of your company must approve and sign the application.

(f) See § 1048.255 for provisions describing how we will process your application.

(g) We may require you to deliver your test engines to a facility we designate for our testing (see § 1048.235(c)).

164. Section 1048.205 is revised to read as follows:

§ 1048.205 What must I include in my application?

This section specifies the information that must be in your application, unless we ask you to include less information under § 1048.201(c). We may require you to provide additional information to evaluate your application.

(a) Describe the engine family's specifications and other basic parameters of the engine's design and emission controls. List the fuel types on which your engines are designed to operate (for example, gasoline and natural gas). List each distinguishable engine configuration in the engine family.

(b) Explain how the emission-control system operates. Describe in detail all system components for controlling exhaust emissions, including all auxiliary-emission control devices (AECs) and all fuel-system components you will install on any production or test engine. Describe the evaporative emission controls. Identify

the part number of each component you describe. For this paragraph (b), treat as separate AECs any devices that modulate or activate differently from each other. Include all the following:

(1) Give a general overview of the engine, the emission-control strategies, and all AECs.

(2) Describe each AEC's general purpose and function.

(3) Identify the parameters that each AEC senses (including measuring, estimating, calculating, or empirically deriving the values). Include equipment-based parameters and state whether you simulate them during testing with the applicable procedures.

(4) Describe the purpose for sensing each parameter.

(5) Identify the location of each sensor the AEC uses.

(6) Identify the threshold values for the sensed parameters that activate the AEC.

(7) Describe the parameters that the AEC modulates (controls) in response to any sensed parameters, including the range of modulation for each parameter, the relationship between the sensed parameters and the controlled parameters and how the modulation achieves the AEC's stated purpose. Use graphs and tables, as necessary.

(8) Describe each AEC's specific calibration details. This may be in the form of data tables, graphical representations, or some other description.

(9) Describe the hierarchy among the AECs when multiple AECs sense or modulate the same parameter. Describe whether the strategies interact in a comparative or additive manner and identify which AEC takes precedence in responding, if applicable.

(10) Explain the extent to which the AEC is included in the applicable test procedures specified in subpart F of this part.

(11) Do the following additional things for AECs designed to protect engines or equipment:

(i) Identify the engine and/or equipment design limits that make protection necessary and describe any damage that would occur without the AEC.

(ii) Describe how each sensed parameter relates to the protected components' design limits or those operating conditions that cause the need for protection.

(iii) Describe the relationship between the design limits/parameters being protected and the parameters sensed or calculated as surrogates for those design limits/parameters, if applicable.

(iv) Describe how the modulation by the AEC prevents engines and/or

equipment from exceeding design limits.

(v) Explain why it is necessary to estimate any parameters instead of measuring them directly and describe how the AEC calculates the estimated value, if applicable.

(vi) Describe how you calibrate the AEC modulation to activate only during conditions related to the stated need to protect components and only as needed to sufficiently protect those components in a way that minimizes the emission impact.

(c) Explain how the engine diagnostic system works, describing especially the engine conditions (with the corresponding diagnostic trouble codes) that cause the malfunction-indicator light to go on. Propose what you consider to be extreme conditions under which the diagnostic system should disregard trouble codes, as described in § 1048.110.

(d) Describe the engines you selected for testing and the reasons for selecting them.

(e) Describe the test equipment and procedures that you used, including any special or alternate test procedures you used (see § 1048.501).

(f) Describe how you operated the emission-data engine before testing, including the duty cycle and the number of engine operating hours used to stabilize emission levels. Explain why you selected the method of service accumulation. Describe any scheduled maintenance you did.

(g) List the specifications of each test fuel to show that it falls within the required ranges we specify in 40 CFR part 1065, subpart H.

(h) Identify the engine family's useful life.

(i) Include the maintenance instructions you will give to the ultimate purchaser of each new nonroad engine (see § 1048.125).

(j) Include the emission-related installation instructions you will provide if someone else installs your engines in a piece of nonroad equipment (see § 1048.130).

(k) Identify each high-cost warranted part and show us how you calculated its replacement cost, including the estimated retail cost of the part, labor rates, and labor hours to diagnose and replace defective parts.

(l) Describe your emission control information label (see § 1048.135).

(m) Identify the emission standards to which you are certifying engines in the engine family.

(n) Identify the engine family's deterioration factors and describe how you developed them (see § 1048.245).

Present any emission test data you used for this.

(o) State that you operated your emission-data engines as described in the application (including the test procedures, test parameters, and test fuels) to show you meet the requirements of this part.

(p) Present emission data to show that you meet emission standards, as follows:

(1) Present exhaust emission data for HC, NO_x, and CO on an emission-data engine to show your engines meet the applicable duty-cycle emission standards we specify in § 1048.101. Show emission figures before and after applying adjustment factors for deterioration factors for each engine. Include test data for each type of fuel from 40 CFR part 1065, subpart H, on which you intend for engines in the engine family to operate (for example, gasoline, liquefied petroleum gas, methanol, or natural gas). If we specify more than one grade of any fuel type (for example, a summer grade and winter grade of gasoline), you only need to submit test data for one grade, unless the regulations of this part specify otherwise for your engine. Note that § 1048.235 allows you to submit an application in certain cases without new emission data.

(2) If your engine family includes a volatile liquid fuel (and you do not use design-based certification under § 1048.245), present evaporative test data to show your vehicles meet the evaporative emission standards we specify in subpart B of this part. Show these figures before and after applying deterioration factors, where applicable.

(q) State that all the engines in the engine family comply with the field-testing emission standards we specify in § 1048.104 for all normal operation and use when tested as specified in § 1048.515. Describe any relevant testing, engineering analysis, or other information in sufficient detail to support your statement.

(r) For engines with maximum engine power above 560 kW, include information showing how your emission controls will function during normal in-use transient operation. For example, this might include the following:

(1) Emission data from transient testing of engines using measurement systems designed for measuring in-use emissions.

(2) Comparison of the engine design for controlling transient emissions with that from engines for which you have emission data over the transient duty cycle for certification.

(3) Detailed descriptions of control algorithms and other design parameters for controlling transient emissions.

(s) Report all test results, including those from invalid tests or from any other tests, whether or not they were conducted according to the test procedures of subpart F of this part. If you measure CO₂, report those emission levels. We may ask you to send other information to confirm that your tests were valid under the requirements of this part and 40 CFR part 1065.

(t) Describe all adjustable operating parameters (see § 1048.115(e)), including production tolerances.

Include the following in your description of each parameter:

(1) The nominal or recommended setting.

(2) The intended physically adjustable range.

(3) The limits or stops used to establish adjustable ranges.

(4) Information showing why the limits, stops, or other means of inhibiting adjustment are effective in preventing adjustment of parameters on in-use engines to settings outside your intended physically adjustable ranges.

(u) Provide the information to read, record, and interpret all the information broadcast by an engine's onboard computers and electronic control units. State that, upon request, you will give us any hardware, software, or tools we would need to do this. If you broadcast a surrogate parameter for torque values, you must provide us what we need to convert these into torque units. You may reference any appropriate publicly released standards that define conventions for these messages and parameters. Format your information consistent with publicly released standards.

(v) Confirm that your emission-related installation instructions specify how to ensure that sampling of exhaust emissions will be possible after engines are installed in equipment and placed in service. If this cannot be done by simply adding a 20-centimeter extension to the exhaust pipe, show how to sample exhaust emissions in a way that prevents diluting the exhaust sample with ambient air.

(w) State whether your engine will operate in variable-speed applications, constant-speed applications, or both. If your certification covers only constant-speed or only variable-speed applications, describe how you will prevent use of these engines in applications for which they are not certified.

(x) Unconditionally certify that all the engines in the engine family comply with the requirements of this part, other

referenced parts of the CFR, and the Clean Air Act.

(y) Include estimates of U.S.-directed production volumes.

(z) Include other applicable information, such as information specified in this part or part 1068 of this chapter related to requests for exemptions.

165. Section 1048.210 is revised to read as follows:

§ 1048.210 May I get preliminary approval before I complete my application?

If you send us information before you finish the application, we will review it and make any appropriate determinations, especially for questions related to engine family definitions, auxiliary emission-control devices, deterioration factors, testing for service accumulation, and maintenance. Decisions made under this section are considered to be preliminary approval, subject to final review and approval. If you request preliminary approval related to the upcoming model year or the model year after that, we will make best-efforts to make the appropriate determinations as soon as practicable. We will generally not provide preliminary approval related to a future model year more than two years ahead of time.

1048.215 [Removed]

166. Section 1048.215 is removed.

167. Section 1048.220 is revised to read as follows:

§ 1048.220 How do I amend the maintenance instructions in my application?

You may amend your emission-related maintenance instructions after you submit your application for certification, as long as the amended instructions remain consistent with the provisions of § 1048.125. You must send the Designated Compliance Officer a request to amend your application for certification for an engine family if you want to change the emission-related maintenance instructions in a way that could affect emissions. In your request, describe the proposed changes to the maintenance instructions. We will disapprove your request if we determine that the amended instructions are inconsistent with maintenance you performed on emission-data engines.

(a) If you are decreasing the specified maintenance, you may distribute the new maintenance instructions to your customers 30 days after we receive your request, unless we disapprove your request. We may approve a shorter time or waive this requirement.

(b) If your requested change would not decrease the specified maintenance,